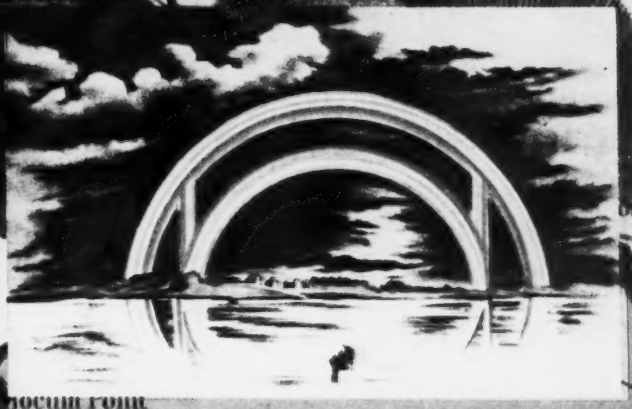
(GREAT TRACT Nº 1.)

Shingle Bay Pond



Rock Point

Fern or Hobby I.

Camp

Camp

Sister Island

Eagle Island

Rock

Rock

Sable I.

540 feet ABOVE TIDE.

Mink I.

Rocks

LONESOM

tate of New York

Conservation Depart

Verplanck Colvin

Superintendent N.Y.S. Land Survey

Clint West

ALONG with the two Grovers (Grover Lynch of Newcomb and Grover Smith of Adirondack), Clint West retired as a Department Ranger in the spring of 1947. Between the three of them, these Rangers had a total of 88 years of service in the Conservation Department, and so their joint retirement was the occasion for quite a party. There are some who claim that the old Wells House in Pottersville has never been the same since, but anyway the place was packed (it isn't every day you get a chance to pay tribute to three such men), and when it was all over Clint West went back to his farm in Olmstedville, officially retired from the Conservation Department.

At least that was the idea. But the last time we saw him, which was only a couple of months ago, he didn't look as though he had retired from anything. He was still working, and furthermore he was still working for the Conservation Department—stringing a telephone line to the fire tower on Vanderwhacker Mountain. We stopped and asked him how it was going, and he said he had a good crew and everything was going good. But he said he felt pretty tired.

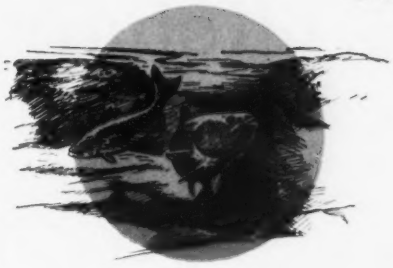
Clint West died on December 14th. The service was held in his home town of Olmstedville, and the church was so crowded that a lot of people couldn't get in. A good many of them (including the two Grovers) had helped to pack the Wells House six years ago, but this time there were new faces even among the honor guard of 26 Rangers. Clint kept on making friends until he died.

To most people who knew him, Clint's death means the passing of the Keeper of Lake Colden; it was here, in the shadow of Mt. Marcy, that for almost 20 years Clint maintained the Ranger cabin, cut out trails, fought fires, built dams, fly-fished for trout and cooked them without having them curl up. Everybody that passed by loved him and learned from him—and there were many who passed by and loved and learned.

But for a lot of us here in the Department, the death of Clint West means even more. It was a proud day when you could say that you and he were working for the same outfit.

—P. W. FOSBURGH

The New York State
Conservationist



A prison without walls

The question is this: *Could and should prison labor be applied to certain types of State conservation work?* A report on such an experiment in a neighboring state begins on the following page.

•

Ralph Waldo Emerson was certainly a God-fearing man and an honest American. He once said, however, that he had never heard of a crime which he himself might not have committed.

In acknowledging that he was inherently capable of crime and that criminals were of his own kind and species, Emerson was probably being more honest than most of us. If circumstances had been different—if, say, our families had needed something to eat and we couldn't provide it—how many of us might have stolen food?

Yet most of us who have been able to follow the straight and narrow path have taken a very uncompromising attitude toward those who have gone astray. We have not only disowned them; we have put a lot of them in jail, with little thought as to what might happen to them after that. Out of sight, out of mind.

Warden Lawes, writing from Sing Sing, was profoundly disturbed by this attitude of the public. "Like the housewife who cleans house by sweeping the rubbish under the bed or into hidden corners, so modern society complacently rids itself of misfits by hiding them from public view, regardless of moral filth lurking in those dark recesses."

Lawes never disputed the necessity for prisons. But for a majority of his wards he dreamed of a "prison without walls," where men could be reconditioned rather than written off as a total loss. The Department of Correction of this State for many years has had virtually the same objective, and is still trying to eliminate the obstacles that stand in the way of its achievement.

If we can help, we're ready and more than willing. Our business is Conservation, not Correction, but possibly the forging of a connecting link between our separate fields of operation might be mutually beneficial. The Department of Correction has a pool of man-power that needs using; the Department of Conservation has much work that needs doing. If it seems advisable to have more of our prisoners do tasks while doing time, we can supply the tasks.—Editor

Contents

VOLUME 8 NUMBER 4

FEBRUARY-MARCH, 1954

REBUILDING LAND AND MEN	2	*Arthur T. Lyman*
WHY NOT IN NEW YORK?	4	*W. M. Foss*
HOWLAND'S ISLAND	5	*E. L. Cheatum*
COMPENSATION ON WOODS WORK	6	*W. M. Foss*
ONEIDA LAKE PIKE-PERCH HATCHERY	8	*David G. Allen*
ONEIDA LAKE PIKE-PERCH	9	*James Galligan*
LOUIS AGASSIZ FUERTES	10	*Mary Fuertes Boynton*
PARADOX LAKE	12	*Martin Pfeiffer*
RAILROADS AND CONSERVATION	13	*Kenneth C. Compton*
STRIPED BASS IN NEW YORK WATERS	14	*Edw. C. Raney*
SCHOHARIE COUNTY	17	*H. Wayne Trimm*
THE BIG MOOSE LAKE PROGRAM	18	*W. L. Judson, W. Mason Lawrence*
VERPLANCK COLVIN	20	*Roland B. Miller*
SURVIVAL	24	*Wm. H. Wadsworth*
PROBLEM OF SMALL WATERSHEDS	27	*Irving B. Stafford*
THE BACK OF THE BOOK	29	*(Scatter Shots, Etc.)*
LETTERS TO THE EDITOR	34	*(From Our Readers)*
BOOTSTRAPS FARM	40	*Clayt Seagears*

STATE OF NEW YORK, THOMAS E. DEWEY, *Governor*

CONSERVATION DEPARTMENT, PERRY B. DURYEA, *Commissioner*

J. VICTOR SKIFF, *Deputy Commissioner*

ROBERT A. WELLS, *Secretary*

CONSERVATION EDUCATION, CLAYT SEAGEARS, *Director of Division*

THE CONSERVATIONIST, P. W. FOSBURGH, *Editor*

ROLAND B. MILLER, *Managing Editor*

MICHAEL C. WALES, *Circulation Manager*

EARL McGUIRK, FRED CHAMBERS, *Photographers*

W. I. VAN DER POEL, JR., *Design and Typography*

TO SUBSCRIBE. Print your name, street address, zone and state. Send with $1 (check, money order or cash at senders' risk) to *The Conservationist*, Room 515, Arcade Bldg., Albany 1, N. Y. Single copies, $.25. NO STAMPS, PLEASE.

Permission is granted to reprint any text from this magazine provided proper credit is given to the New York State Conservation Department and to this magazine.

The Conservationist is an official publication of the N.Y.S. Conservation Dept., published every two months at the Department's offices, Arcade Bldg., Albany, N. Y. No advertising accepted. Subscription rate $1.00 per year. Entered as Second Class matter July 24, 1946 at the Post Office at Albany, N. Y. under Act of March 3, 1879. Printed in U. S. A.

Rebuilding Land

AS background for this article, I would like to outline very briefly two problems that confront all American citizens. Both of these problems have been before the public for some time. There is a fairly general but vague awareness that they exist, and piecemeal solutions have been presented and tested. The relationship between these two problems and their possible solution, however, has been explored very little.

The first problem has to do with the conservation of our natural resources. The need for such conservation has been pointed out in great detail, and we have progressed to the point where the general public at least pays lip service to it. A great deal more needs to be done in educating the public as to the importance of conservation, but for the purposes of this article, suffice it to say that the reckless exploitation of our natural resources has presented us with a grave problem: not only must we stop such exploitation; we must do our best to repair the damage. As part of our inheritance, we have throughout the Nation vast areas of "broken land."

The second problem has to do with "broken men." We must not only recognize, but come to grips with the indisputable fact that our civilization is producing an increasing number of people who cannot adjust themselves to contemporary society. These are the juvenile delinquents and others who eventually become wards of the government—State or Federal—housed in penal or corrective institutions. We have more and more prisons and security institutions, peopled by a restless population which for the most part can never be reclaimed by mere confinement. What to do with our "broken men?"

As I said before, a common solution to both of these problems has been explored only a little; the problems have been considered separately, and the solutions have been demonstrably inadequate. In most of our states, too little money has been spent in rehabilitating the land on the one hand, and in the proper treatment of our prison populations on the other. Manpower on the scale necessary for the former has not been available since the days of the C.C.C., and we have been even more remiss in our rehabilitation programs for our prison populations.

But what could be more simple and natural than to combine the problem of our broken men with the problem of our broken land? It has been demonstrated that much can come of this union.

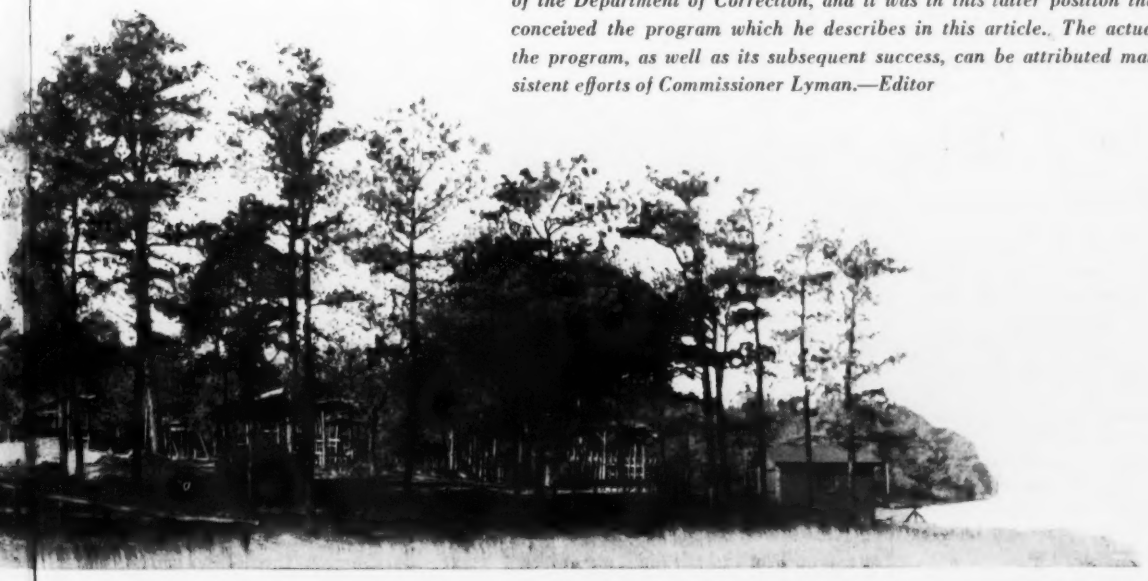
In Massachusetts, an experimental reforestation camp manned by inmates taken from our prisons was established in the spring of 1952 within the Myles Standish State Forest near Plymouth. This camp was not the first of its kind in America, since reforestation camp programs had previously been established successfully in California, Wisconsin, Michigan and Illinois. However, Massachusetts is a heavily populated state with a comparatively small geographical area, whereas the others were comparatively sparse in population and much larger in area. This in itself made the selection of the camp site more difficult, since it could not be very remote from other communities. Public hearings were held in two parts of the state to determine the public reactions. Although there was some opposition, mainly due to lack of public understanding, Myles Standish State Forest was selected as a site for the first camp.

Fifty inmates of our state institutions were carefully screened and selected. The selection process has been proved to be sound and can be very simply described. Lifers, drug addicts and sex cases were not considered eligible. The men chosen were required to show more than average

and Men

by Arthur T. Lyman

Mr. Lyman is Commissioner of the Department of Natural Resources for the Commonwealth of Massachusetts. Before accepting this appointment he was Commissioner of the Department of Correction, and it was in this latter position that he originally conceived the program which he describes in this article. The actual institution of the program, as well as its subsequent success, can be attributed mainly to the persistent efforts of Commissioner Lyman.—Editor



ability, character and intelligence to be considered eligible, and also had to demonstrate that they could assume responsibility and that they had a real desire to do constructive work.

This seems like a simple solution to the twin problems of human and natural rehabilitation. In the first place, prison is the worst possible place for many of the inmates. Instead of rebuilding themselves in prison, the inmates are confronted with restrictions, loneliness, and comparative idleness which tend to make them more withdrawn into themselves, produce acute psychological disturbances and render them more and more unfitted for a useful life. Therefore, it was decided to remove most of the standard security measures in this first camp. We have no barbed wire, no armed guards, no pill boxes nor searchlights, no walls, no bars and no lock-up cells. (On the other hand, the men are not supposed to wander out of sight of the camp grounds.) It is the very lack of security measures that most impresses each new man on his arrival at Reforestation Camp No. 1. For the first time—perhaps in all his life—he feels trusted, and with this comes a new sense of confidence in himself; he is being treated like a man, not like a prisoner.

But he soon learns that he has to do a man's work. There is literally not enough time in each day for him to accomplish his assigned work, to indulge his spare time hobbies or to take advantage of the many educational opportunities which are available to him. The vital conservation work in the forest must go on day after day—and it is tough, rugged work performed in all kinds of weather. Trees must be planted, overgrown areas must be thinned and mature trees must be cut; roads and firelines (covering almost every part of the 12,000 acre tract) must be widened and improved; more camp buildings become necessary. Thus the men learn the practical trades of carpentry, plumbing, electrical work, masonry, painting, automotive repair, forestry and land planning.

The men selected for this experiment have proved themselves as versatile as the proverbial SeaBees. In eighteen months they have produced about $150,000 worth of work for the state which would not have been possible otherwise. In addition to the vital land improvement, they have built two large new camping areas and a picnic area, so that more people from our cities can find the relaxation of body and soul that nature can provide. Except for the barracks and mess hall, they have built all the other camp buildings out of salvaged and surplus materials, and these buildings add up to an impressive total: A chapel and a recreation hall, a fireproof garage, storage warehouses, water and pumping systems and a hobby shop. One man raised a vegetable garden (he happened to be a cook). Another decided that a nice lawn was needed, and produced it. Attractive white pine post and rail fencings have been installed along the edge of the road and area around the camp. Children's sandboxes have been built, because the men here welcome the arrival of their families and children on Saturdays and Sundays. You do not see a child's sandbox in prison.

The costs of housing the men at this camp are fractional to the costs of housing them in the orthodox State institutions. Therefore, the taxpayers have reason to rejoice. The value of the work performed on improving the land is difficult to estimate. Today there are many hundreds of thousands of acres of new plantations in national and state forests that need immediate attention. Failure to do vitally needed thinning and clearing on these lands will result in the loss of millions of dollars of future timber, but the

cost of doing this work by ordinary means is staggering. Many more flood control and storage dams are needed to preserve our water resources, and many of these could be constructed by more men in more reforestation camps. Such camps, located in national or state forests, could also provide firefighters in time of need. Summing it up, there is enough conservation work to be done to keep many more men busy than those from our prisons considered eligible for this type of work.

The whole case for reforestation camps like Myles Standish collapses unless it can be shown that the men have made good. The facts are that over 100 men have come to this camp, and none has tried to escape. There are several very good reasons. In the first place, a man appreciates the opportunity he is given here. I doubt if there is any man in Massachusetts prisons today who would not give anything for the chance to be in a reforestation camp—where a man is treated like a man. He is on his honor and he soon learns that he can best help himself by helping others. The little cook who made his own vegetable garden knew that. He knew too that a violation of the code would harm the others and perhaps affect the whole program of rehabilitation.

There is one particularly gratifying result of the changes wrought by Myles Standish: Private interests, which heretofore would never hire ex-prisoners, have given many of these men that precious chance for living a new life. But perhaps the most impressive tribute has come from many of the campers and picnickers (as well as local citizens) who visit the camp: Many request permission to attend the religious services conducted in the little chapel built by these men, in whom they have acquired confidence.

Why not in New York?

FOREST fires, destructive lumbering practices of the past, and the abandonment of non-productive farm lands have combined to create a serious land use problem over large sections of this country. In an effort to solve this problem many states, New York included, have acquired for production forest purposes extensive acreages of lands so used and abused, and then they have initiated long-term land rehabilitation programs. Most of the states have made commendable progress in such efforts, but their inability to obtain sufficient funds to meet the annual maintenance charges has been a serious obstacle in developing the program.

Two years ago our attention was called to the prison labor camps which had been instituted by some of the states for forest improvement work on their state forests. We have followed the progress of these experimental camps with keen interest, and upon receiving an invitation from Commissioner Lyman of Massachusetts last November to visit their prison camp at the Miles Standish State Forest near Plymouth, we promptly accepted. We discounted somewhat the glowing reports previously received concerning this camp, but after talking with Commissioner Lyman in Boston it became apparent that he really had something to talk about. And after close inspection, we *knew* that he had.

The camp at the Miles Standish Forest was established in the spring of 1952, and the results obtained in the short time it has been in operation—both from the standpoint of rehabilitation of prisoners and the management of state forests—are nothing short of amazing. The success of this program is of course in no small measure due to the fine co-operation of the Departments of Correction and Conservation of the State of Massachusetts, but a large share of the credit must go to the inmates themselves; they have pitched in to make this experiment a success.

All types of forestry work are performed by the prisoners (who are called "camp men"), including road construction and maintenance, tree planting, forest stand improvement, campsite and beach development, forest fire fighting, and many other miscellaneous projects. The amount and quality of work performed compare favorably with that accomplished by "hired help," and during the 19 months the camp has operated, the men have turned out work valued by Commissioner Lyman at over $150,000. The enthusiasm of everyone connected with the project, including the inmates, leaves one with the feeling that perhaps Massachusetts has found at least a part of the answer to their state forests management problem.

It might be well for the Empire State to consider carefully the feasibility of embarking upon a similar program. We are now faced with the necessity of expending substantial sums of money in the management of some 550,000 acres of State forests lying outside the Adirondack and Catskill Parks. We have already spent approximately $14,000,000 in acquiring, planting and rehabilitating these lands, but if we are to protect this investment and assure a dividend in future merchantable timber, some provision must be made to perform the necessary cultural and rehabilitation work.

The magnitude of the workload involved can perhaps be more fully appreciated when we consider the following facts: On these areas there are over 35,000 acres of land needing reforestation, 260,000 acres of plantations which either now or in the immediate future will require thinning and pruning, 226,000 acres of natural stands needing silvicultural treatment, 336 miles of truck trails requiring maintenance, and 127 miles of access roads still to be built.

A further analysis of the expected workload on the State Forests for the period 1953 to 1963 reveals this: Approximately 70,000 man-days will be required each year for the next 20 years to perform the essential work; at the present wage scale, this would require an annual expenditure of about three-quarters of a million dollars.

New York's State Forests lend themselves well to the establishment of forestry camps similar to the one described by Commissioner Lyman, since many of the areas are located some distance from communities and embrace sufficient acreage to warrant the establishment of a permanent type camp. The workload outlined above would provide gainful employment for at least ten camps of 50 men each for an indefinite period. We realize that the establishment of this number of camps would not be feasible or practicable at the present time, but a few camps located at strategic points would materially assist in expediting our State forestry program.

We are not in a position to speak for the Department of Correction as to the desirability of such camps as rehabilitation centers for inmates of their institutions. And we are aware that there may be reasons why such a program cannot be initiated in New York State. However, in view of the success of this type of program in other states, we feel that careful consideration should be given to the feasibility of undertaking such a program in New York.

—W. M. Foss, *Director, Lands & Forests*

Howland's Island

FIELD WATERFOWL LABORATORY

LOOMING importantly among plans for waterfowl work in the future are those underway for Howland's Island. This 3,000-acre island, near Port Byron, Cayuga County, is surrounded by the Seneca River and the Barge Canal. It was first acquired as a game refuge in 1932 and in 1939 was developed into a game farm in which capacity it functioned until 1951. Propagation of pheasants was the primary aim at Howland's Island although some waterfowl propagation, largely of an experimental nature, was also conducted. With revival of pheasant populations from their deep slump in the mid-forties, budgetary economies in pheasant production were decided upon, and the function of Howland's Island as a game farm was terminated. In 1951 it was designated a game management area and turned over to what is now the Game Management Section, Bureau of Game.

As the Department's waterfowl program developed embracing research, management, and propagation, it became evident that a site should be found where the propagation work could be concentrated most suitably and economically and where field headquarters for various phases of waterfowl research, marsh ecology studies and wetlands management and development work could be satisfactorily located. Howland's Island has been chosen for this multiple use objective.

Centrally located in the State, Howland's Island is only a few miles from the Federal Montezuma Migratory Waterfowl Refuge, strategically situated with reference to our most intensive small marsh construction activities under the Federal Aid Habitat Improvement program and only a short run from Cornell University from where students and faculty may come for specific studies on the biology and ecology of waterfowl. The Island has a series of ponds and shallow water areas totaling some 293 acres, many of which are inter-connected, and where water levels can be manipulated to best serve propagation needs and to test the effects of various water levels on development of food and cover plants for waterfowl. It is also equipped with excellent storage buildings, shop space, and a comfortable residence headquarters. The uplands have already been extensively developed for hay and grain.

Recently, personnel from the Bureau of Game and the Conservation Department of Cornell University met at Howland's Island to consider immediate problems of development in line with general objectives. Major items requiring immediate attention are: (1) Clearance of brush from the borders of designated ponds to increase availability of nesting areas for waterfowl. (2) Complete surveys and designs for water control structures to allow for adequate water level manipulation in all existing impoundments. (Construction of some structures most necessary to propagation plans are to be completed this December.) (3) Initiate construction of waterfowl propagation facilities this next spring and summer. (4) Complete plans in 1954 for an additional marsh impoundment of approximately 90 acres. (5) Construction of this new impoundment in 1955.

Last year several of the existing impoundments were drained and soil samples taken to determine the character of soil conditions that have developed over a long period. Subsequent tests were made to ascertain the effects of exposure on pond bottom soils. Previously flooded edges were treated by planting of cereal crops and cultivation to secure necessary aeration of the soil and oxidation of certain of its chemical constituents. This work will be continued on all ponds to improve them for waterfowl use, both for artifically propagated and naturally produced birds.

It is anticipated that the Department of Conservation at Cornell University will co-operate on fact finding studies dealing with waterfowl behavior and use of the Island, and in evaluations of habitat improvement efforts on both wetland and upland areas. The propagation work on such species as red-head, pintail, canvasback, gadwall, and shovelers should offer opportunity for interesting and useful studies on social tolerances or intolerance that these species may have for one another. This aspect will be of particular value as it applies to territorial behavior during the nesting and rearing season. It will be recalled that these species are being reared for liberation on our many small 48-D marshes with the object of establishing breeding residents in New York, and to share breeding areas with our native residents such as the mallard, teal, black and woodducks.

A committee of four including John Nemes, District Game Manager; Earl Holm, Superintendent of Game Farms; Dirck Benson, Leader of Waterfowl Research; and Art. Cook, Leader of Marsh Ecology studies, has been appointed to co-ordinate planning, development and use of these State lands. This should aid in assuring the most effective combination of management, propagation and research activities to achieve maximum waterfowl production and use of the Department's field waterfowl laboratory at Howland's Island.

—E. L. CHEATUM

Compensation Insurance on Woods Work

AS spokesman for the New York State Conservation Department, I wish to express my appreciation of your acceptance of our request to be heard before the Moreland Act Commission on the subject of compensation insurance as it applies to forests and forestry. Our request to present our case before your Commission was based on the following belief:

That the present Compensation Law is the greatest single deterent to the proper harvesting of forest products in New York, and to the proper management of our forests for the future.

We in the Conservation Department do not consider it to be within our province to assess or criticize the law itself, or its administration. But we *are* in a position to know how the high compensation insurance rates provided by this law have affected forest industries and forest management in New York, and our presentation to this Commission will therefore be concerned only with these subjects.

At the outset, it appears advisable that we state a few general facts regarding the importance of forests and forestry in our State. The full effects of the law can be appreciated only when viewed against the background provided by these facts:

1. More than one-third of the total area of New York is comprised of forest lands and the percentage is increasing annually. Obviously, the manner in which so large a proportion of our State is used and managed is a matter of primary concern to *all* of our citizens.

2. Industries processing forest products represent a big business in New York; a business which we can ill afford to lose in view of the employment it offers, the revenue it brings in, the taxes it pays to State and local government.

3. The protection and wise use of our forest lands is vitally important not only to our industries, but to our lands. The State, through its reforestation program, its Forest Practice Act, and its program of State Forests is already committed to a policy of land reclamation and improvement in which social as well as economic objectives are pursued. We feel that these programs are thoroughly sound, and that whenever possible, any factor that works against their success should be removed.

We now proceed to a particular analysis of the effects of our present Compensation Law. As indicated above, these effects are felt principally by our wood using industries on the one hand, and on the other hand by the small landowner who wishes to practice forestry and improve his property. Let us take up these items separately, beginning with the effect that the present Compensation Law has on the larger industries of this State.

We quote at this point a letter recently received from the U. S. Bobbin & Shuttle Company, of Tupper Lake.

"Our Company began operations at Tupper Lake in 1949 with a substantial investment in plant, equipment and timberlands. Logs cut and delivered to the mill yards during 1949 and 1950 were reasonable in cost, but by 1953, log costs in the mill yard had doubled over 1949.

"Workmen's Compensation Insurance comprised a major part of our labor costs, as you can readily understand. Our compensation rate for the year ended May, 1953 was $24.393 per $100 of payroll, or almost 25 per cent. I personally checked Workmen's Compensation rates in our neighboring State of Vermont and learned that the largest logging operator in the State was paying a Workmen's Compensation rate of less than $6 per $100 of payroll.

"Turning to the dollars and cents on payrolls, our total payroll in New York State for the year 1952 was $440,000, of which $256,000 represented logging payrolls. If you apply the compensation rate of $24.39 to the logging payroll of $256,000, you will find that our compensation insurance cost was a little over $62,000 for the year. If the rate in New York State had been anywhere close to the $6 rate I quoted you for an adjoining state, our compensation insurance costs would have been approximately $15,000 for the year—or a saving to us of $47,000. An excess cost of $47,000 a year may be immaterial to the economists in your Department, but to a company the size of ours, it is a very important factor.

"We were reluctant to reach the decision to close our operations at Tupper Lake. But there is a limit to our ability to absorb increasing operating costs, and that limit was reached in the year 1952."

From the above correspondence it will be seen that the terms of our present Compensation Law have been a deciding factor in driving a large wood-using industry out of New York. We take this opportunity to suggest to your Commission that the departure of U. S. Bobbin and Shuttle Company from Tupper Lake will have a most serious effect upon the welfare of that community. The company met 14 per cent of the industrial payroll of the town.

It is not only the large operator, however, who is affected by the present Compensation Law. In fact, the most serious consequences of this law are felt by the small land owner, in whose hands (according to our careful appraisal) are the most valuable and productive woodlands in this State. Under the present law, the owner of such lands must pay a minimum of $153 for the cheapest compensation insurance policy available to him. The forestry operations on his land are considered by us to be of extreme importance, and it was the realization of this which prompted us to promote our Forest Practice Act. But in view of the insurance premiums which must be paid by the small operator, many of the practices for improving forests under the terms of this Act are economically ruinous to the co-operator. The special rate offered to co-operators with the Forest Practice Act —the silviculture rate—although aimed in the right direction, has not met the problem.

The State itself has been placed at a disadvantage as a result of our present Compensation Law. As you know, the State, through its Conservation Department, undertook three years ago a major contracting operation in its attempts to salvage timber from State land; approximately one million cords of wood were leveled by the land hurricane of November 25, 1950. The material available for salvage was considerably more than our local wood-using industries could handle, and we therefore appealed to similar industries in neighboring states. Our offer to out-of-state operators is still in effect, but to date we have had few bidders.

We believe that the answer can be found in a comparison of compensation insurance rates. Our own current manual rate is $20.90. Comparable figures for adjacent states are as follows: Massachusetts $11.48, New Jersey $8.40, Connecticut $9.43, Pennsylvania $5.30, Vermont $5.51.

Admittedly, woods work is hazardous. But are we to assume that such work is approximately four times as hazardous in our State (which requires a compensation rate of $20.90) as across the line in the State of Vermont (which requires a compensation rate of only $5.31)? We feel that such an assumption would be entirely ridiculous. Can it be that pulping and logging operations are four times more hazardous in the Town of Ticon-

A statement presented by W. M. Foss, Director of Lands and Forests, at a public hearing conducted December 16, 1953 by Archie M. Dawson, Moreland Act Commissioner investigating compensation insurance.

deroga than they are just a few miles across Lake Champlain in the Vermont Towns of Shoreham and Orwell? It appears to us that we have only ourselves to blame for placing our forest industries at a competitive disadvantage with those of adjacent states.

In addition, we offer the following specific criticisms of the way in which the present law affects industry and forest management:

1. When the compensation law was originally conceived, some 35 years ago, logging was "big woods" business run by saw mills and paper companies, with day labor housed in company-owned camps. Now, the lumber camp has all but faded out of the picture in New York, and the gasoline engine, the hard road and a rising standard of living have made woods work more of an individual enterprise, with workers trading back and forth as opportunities for employment arise. At the present time, almost half of our big saw mills are south of the Mohawk River, and many of those in the Adirondack Region get their logs from the farming country outside the mountains. In other words, there have been profound changes in the operation of our forest industries, and we believe that our compensation law has not been kept abreast of such changes.

2. High compensation rates have resulted in a resort to sub-contracting, designed to make the employee liable for his own accidents. Such sub-contracting obviously is promoted by the terms of the present law, but just as obviously it defeats the fundamental purpose of this law —which is to protect the woods worker.

3. Under the terms of the present law, the employer bears the whole responsibility, although in small operations such as are conducted on many of our forest tracts, he is in no better position financially than the men he hires; he is merely boss of the job. Yet he is liable under the present law to be put out of business by a ruinous compensation award for which he alone is responsible.

4. The present law makes no distinction between the types of risk in forest labor. Yet anyone who has worked in the woods knows that the hazards vary greatly according to the type of work performed. An operator may hire a crew to build a log road, and another crew to cut and skid logs; he pays the same rate of insurance on both.

5. The sub-contracting system which has been devised to shift liability from employer to employee under the terms of the present law has resulted in a decided loss of control by the landowner or operator. Such landowner or operator, in order to save on insurance premiums, must sacrifice the personal supervision that might protect his forests for the future.

At present, there are three means of obtaining compensation insurance in New York: (1) A policy issued by a private company; (2) a policy issued by the State Fund; and, (3) self insurance.

As indicated above, the manual rate offered by private companies on the basis of rates set by the Compensation Insurance Rating Board (a private organization), is $20.90. But contracts with such companies at such a rate are difficult to obtain, and may be terminated by the company when the first accident occurs.

When that happens, the operator has two alternatives: He can turn to the State Fund, which is obliged by law to insure him—or he can go out of business. If he turns to the State Fund, and if the Fund considers him a poor risk, his rate may be set as high as $40 per $100. Needless to say, such a rate may be high enough (a) either to put the operator out of business, or (b) to be an incentive to circumvent the law.

A third method of handling compensation is self insurance, and we quote herewith a letter recently received from Finch, Pruyn and Company, one of the largest landowners and woods operators in the Adirondacks, with regard to their costs for such insurance:

"The rate and severity of accidents in our woodlands department we believe is higher than it should be, and we are working industriously to reduce these accidents, which, *interpreted in cost per $100 payroll, was $4.25 for 1951 and $5.62 for 1952.*"

This letter makes it abundantly clear that something is chronically wrong with the Compensation Law as written, operated and applied by our State government. How is it possible that a private company can meet its compensation costs at a price of $5.62 while the State offers a manual rate of $20.90? And how is it possible that, according to a recent survey, the average compensation rate for all industry in New York is 1½ per cent, while that for woods work is $20.90?

In concluding our presentation, we would like to state again some facts which we consider to be of prime importance:

1. The reforested lands of this State play an extremely important role in the economy of up-state New York, and every effort should be made to protect and improve their future productivity.

2. The high cost of operating forest industries in New York has been a major factor in discouraging expansion of such industries, and, as indicated above, has resulted in the departure of at least one such industry. High compensation rates have been a decisive factor.

3. Present compensation rates have placed owners and operators of New York forest lands in a position where they can no longer compete on equal terms with similar owners in adjacent states.

4. (And we attach particular importance to this:) Present compensation rates place the small landowner in such a position that he cannot afford to practice sound forestry. At present rates, his insurance premium may well eat up any profit that might be made from a small operation, yet such small operations are essential to the continued health and prosperity of our forests.

We in the Conservation Department fully appreciate the importance of giving adequate protection—through compensation insurance and any other reasonable means—to the woods worker. But in our zeal to protect him, we cannot afford to choke off the source of his employment by the continued imposition of excessive compensation insurance costs.

Neither can the State afford to continue to discourage the practice of better forest management, when our need is so great to stimulate the growth of a bigger and better forest crop. New York has 13½ million acres for which there is no other economic use. If we drift along in our present course, we will presently find ourselves with a third of our State consigned to be an economic desert.

We therefore respectfully suggest consideration by your Commission of:

1. The plight of the small landowner, whose operations are not big enough to carry even the minimum compensation insurance contract.

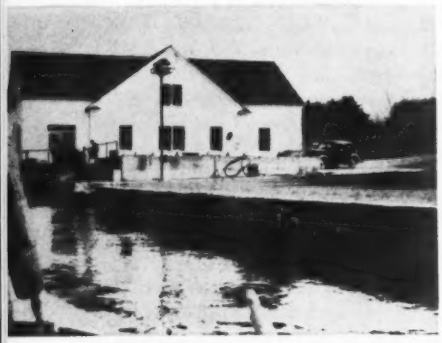
2. The operating procedures of the Workmen's Compensation Board, as applied to Logging (2702) and to Silviculture (0109), looking to simplification and better adjustment to the needs of rural people.

3. A study of the records of woods accidents, to determine their cause and the true nature and severity of the resulting injuries.

4. A determination of the factors which make the cost of Compensation Insurance in New York, when procured from private insurance carriers or from the State Fund, so very much higher than the costs in neighboring States so much higher, too, than with self-insured loggers in our own State.

Oneida Lake Pike-Perch Hatchery

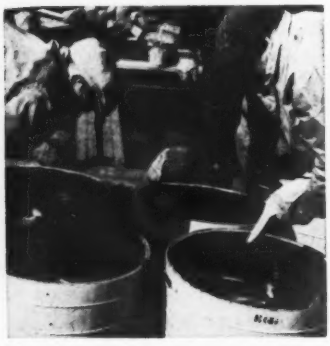
or—from fry to frying pan



1. The new pike-perch hatchery building, a short distance upstream on Scriba Creek at Constantia, north shore of Oneida Lake.

2. Men and boats from the Oneida Hatchery lifting a trap net set offshore to capture breeders.

3. Pike-perch are removed from the trap with a scap net and transferred to tubs in tender-boats for the trip to the hatchery.



5. Experienced hatchery hands separate the female from the male pike-perch; placing the "green" fish in holding tanks while the ripe pike-perch are taken into the hatchery for stripping.

6. In the stripping operation, wooden bowls are used, water is added and the eggs and milt constantly stirred to assure fertilization of maximum number of eggs. Stripped fish are returned to Scriba Creek.

7. During this early spring operation a constant stream of visitors, young and old, are fascinated observers. Visitors are encouraged; they learn first hand about the fish culture aspect of conservation.

9. Eggs are then poured into glass

10. Eggs in jars are constantly agitated by running water. Each jar has a capacity of 450,000 eggs.

11. The cannibalistic nature of these pike-perch fry explains the necessity for immediate stocking.

4. Hatchery crew carts the fish-laden tubs to sorting tanks.

8. Local women are employed to stir fertilized eggs in large wooden tubs during hardening period. After stirring, eggs are washed repeatedly.

12. A ten pound Oneida Lake finale to the pike-perch story.

Oneida Lake Pike-Perch

MANY conservationists and fishermen feel that Oneida Lake is one of the richest and most productive of the lakes in the Northeast. The pike-perch or walleye pike is the most sought after game fish in this body of water, and makes the largest contribution to the total poundage taken.

Fortunately Oneida Lake has several tributaries suitable for natural spawning for this species. But, in addition, the Conservation Department operates a hatchery at Constantia on Scriba Creek. Several million of the young fry are stocked in Oneida—and other suitable waters—each year.

The Conservation Department, realizing the importance of Oneida's fishery resource, over a period of years has collected much data, mostly during the spawn-taking operations, concerning the size distribution, sex ratio, age composition and the growth rate of the adult pike-perch. The studies thus far have revealed that the average size fish (both sexes) of this adult spawning population is about 15.8 inches and weighs one pound eight ounces. The males far outnumber the females in the run—about 4 to 1. The males reach maturity as three- and four-year-olds, but the majority of the females do not spawn until reaching the fourth year. Fish in age groups four to seven dominate the spawning run, with a marked decline in the frequency of occurrence of older age groups.

Walleyes grow slowly in Oneida Lake, particularly from the two-year-old (10 to 12 inches) stage on. This appears to be due to a change in the habits or behavior pattern of the species which could indirectly affect its forage habits.

Also important in distribution and growth studies is a knowledge of the associated species frequenting the habitat of the pike during the different seasons of the year. Both forage and competitor species must be considered. From the limited amount of data on hand regarding the food habits of the Oneida Lake pike, it has been found that the yellow perch is one of the chief items in the diet, although May fly larvae are also taken in considerable numbers when available.

To obtain further information, a tagging program was inaugurated during the 1952 spawning season. Two hundred and sixty pike were selected at random with respect to size, age and sex and were tagged with metal jaw tags. All were released in Scriba Creek. After one full fishing season there have been 34 tags turned in to us—for a reported recovery of approximately 13.5 per cent. This 13.5 per cent might be described as the annual rate of exploitation, or angling mortality, of the pike population in the lake, but this figure is undoubtedly somewhat conservative as experience has shown that tag returns are rarely 100 per cent complete. However, these figures do provide an estimate of the exploitation rate, or angling mortality. It must also be pointed out that this rate of exploitation by angling is distributed over all age classes—from three-year-olds on—and not on any single age class. Therefore it is readily seen that this harvest by fishermen does not seem to be great when compared to the annual natural mortality evident, for it is known that there is a marked decline in the frequency of occurrence of eight-, nine- and ten-year-old fish, most of which we may assume die of natural causes.

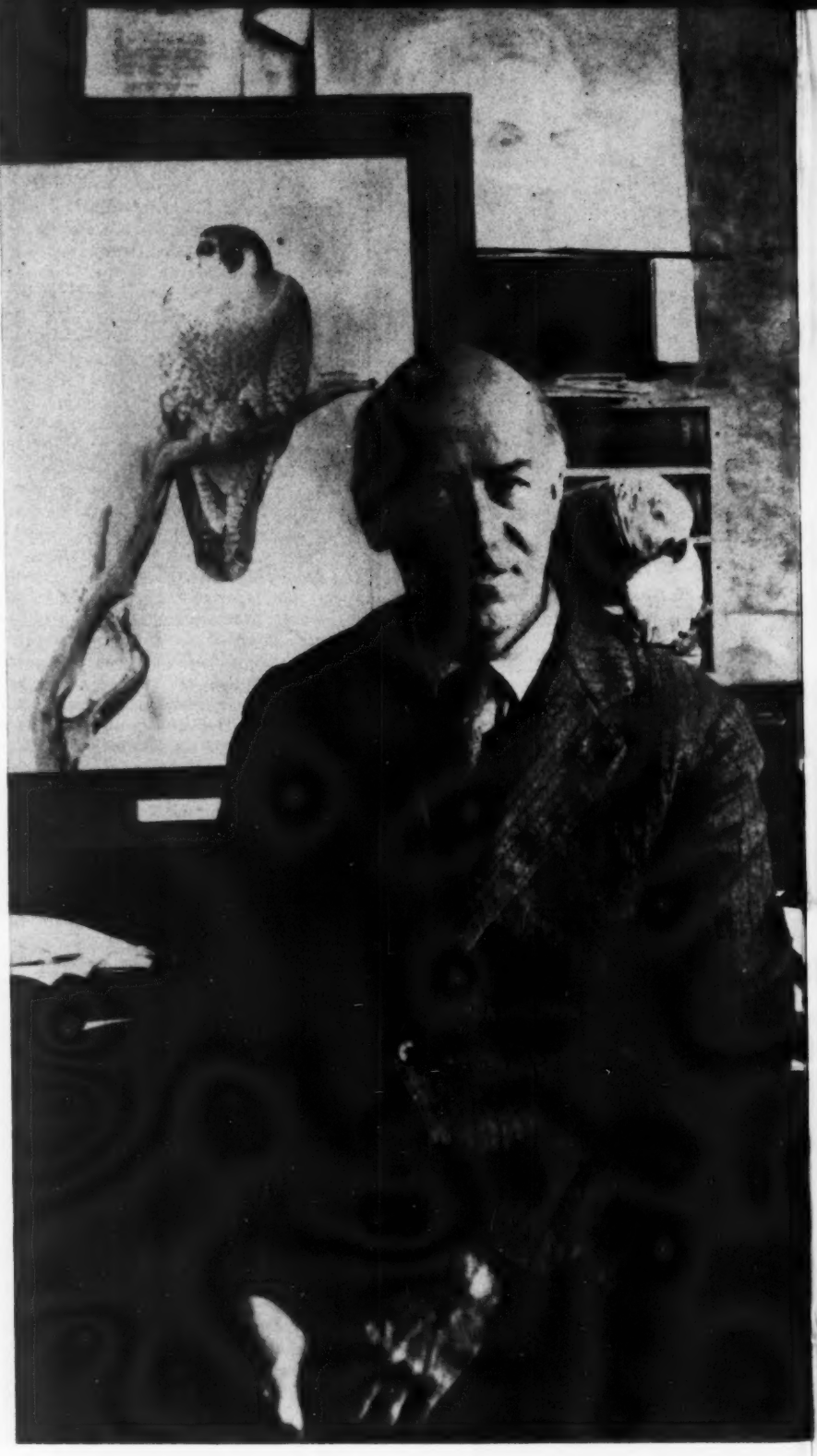
Other information obtained from such a tagging project includes facts regarding seasonal movements and distribution of fish. After examining the reports of tag returns made by fishermen in the 1952-1953 fishing season, it appears that the population that migrates to Scriba Creek in the spring to spawn disperses or scatters over the entire lake after spawning. Only two of the 34 tagged fish recaptured had moved out of the lake proper.

Realizing the opportunity that is afforded when large numbers of fish are available during the spawn-taking operations at the Constantia hatchery, it was decided to tag and process still larger numbers of pike, and this past spring (1953) 550 pike were tagged—more than double the number tagged in 1952.

As of October 1 there have been 54 tagged fish of this group caught during the current fishing season. This is a recovery rate of 9.8 per cent. It can be expected to increase during the forthcoming ice fishing season. In addition there were 22 tagged pike captured which were tagged the previous spring (1952).

With the continued co-operation of fishermen who report the recovery of these tagged fish—giving date, place of capture and the length and weight of the fish—we will build up our knowledge of the sex ratio of the angler's catch, seasonal movement in the lake, growth rate, and the rate of exploitation by angling. It is information of this type that is necessary for the intelligent management of our more important fishery resources.

—JAMES GALLIGAN, *Aquatic Biologist*



Louis Agassiz Fuertes

by Mary Fuertes Boynton

PERHAPS you have experienced a shock of recognition at a bird seen for the first time in nature, identifying it at once because it looks just like a Fuertes' picture. This happens to me over and over again, partly because I have seen more pictures than species of birds in nature, but also because Louis Fuertes' paintings, while accurately representing an individual, manage to reveal the very essence of the type. In 1898, Abbott Thayer, Louis' teacher and the man with the most seeing eye of his generation, had been a devoted ornithologist for more than twenty-five years yet he had the experience too. "It seems as if it was only since I saw your pictures that I had noticed live birds," he wrote to Louis.

Though Louis was then twenty-four years old, at the beginning of his career, Mr. Thayer was in a better position to study his work than we are today; his appraisal was not beclouded by the difficulties that come between Louis' pictures and any student of them now. For one thing the work showed its true freshness, originality, liveliness. Besides the beautifully composed and drawn, but often artificially posed birds of Audubon and the rather sentimental decorations of E. T. Seton, there were to be found in America in the 1890's only stiff profile studies of stuffed or mounted birds in textbooks and scientific monographs, whereas now we are faced by good bird pictures whichever way we look. For another, although there are many exceptions, the major output of his life were illustrations that required two to five kinds of warblers, or herons, or ducks disposed on a single plate so as to reveal their specific differences—a kind of picture that does violence at once to nature and to art.

A third barrier between the student of today and the work of Louis Fuertes is set up by his choice of media. His best work was executed with amazing speed in pencil and watercolor, and was fugitive unless accurately reproduced at once. And here is the chief difficulty: The loss in color and value—even in line—through poor methods of reproduction, careless printing, and ruthless over-use of worn-out plates. Those of *The Birds of New York* are a shocking case in point.

Finally we must consider human progress. Louis Fuertes learned enormously from Audubon, and in his own way went beyond him; what is to prevent those who have studied his pictures from going further still? Methods of color reproduction have improved so much that pictures of inferior draughtsmanship now appear more attractive, and the color camera fills many of the needs he was formerly asked to supply.

In the letter quoted above Thayer goes on to criticize Louis' "values" in painting; he rarely approved of his backgrounds; Frank Chapman was not confident of his ability to compose the figures upon the page. Yet in spite of all this Louis' original work remains essentially as Gerald Thayer described it: ". . . so near being miraculous that it appears to me in a sense unique among human achievements of all sorts. . . . No one has ever painted birds as truly and as intimately as you do, and it is inconceivable that anybody ever shall again."

What sort of person did this work? What was Louis Fuertes like? Perhaps his personality may emerge distinct from a set of contrasts or anomalies characteristic of him. He was called Cornell's best-loved alumnus, Ithaca's favorite citizen. At almost any gathering from alumni rally to Rotary Club lunch he would be the man people were happiest to see, and yet he never was conspicuous. He did not tower above the the crowd, fix you with a blazing eye, or in any way natural or assumed attract attention. Of middle size, bald, round-shouldered, with a rather aquiline nose, he just looked right and normal. His blue eyes were remarkable not for how they looked but for what they saw. His fingers, unlike what people expect artists' fingers to be, were of medium length and stiff, yet with them he could not only draw and paint, and prepare beautiful museum bird skins, but carve in wood, mend anything, make delicate and fancy masks from paper, play the tin whistle and ocarina with dexterity. He could never do mathematics—in school and college he went immediately to sleep on them—yet he was an adequate manager of his own finances, kept his business in good order and supported his family from his drawings alone with an income slightly above that of most professors. Incidentally, although he never was either, he was generally called "Professor" or "Doctor" by the few people in town who didn't know him well enough to call him "Louis" or "Uncle Louis."

He was an artist, a creator. Subject to periods of productive activity as well as to definite non-productive ones, working often under pressure of time, he was never-the-less always perfectly sociable. There were apt to be people in his studio during working hours, watching him, asking questions, handling the curios and books in his collection, yet he could and did paint and visit with them at the same time. He was not nervous, high-strung, restless, or full of kinetic energy, but ever comfortable to be with. He was willing to drop his work to skin a cedar waxwing for a child at any time, yet most of the time he worked and worked and worked, painting his well-nigh countless lively images of birds. He was a passionate lover of natural beauty, and tender-hearted beyond most men, yet he was a happy duck-hunter as well as collector, and did not show pause or qualm at shooting game or specimen. He did not tolerate cats—said they never matured in our neighborhood—yet he cherished eagles, hawks and owls as his favorites among birds, and the "bad" species were not less appealing to him than the "good."

He was immediately sympathetic with people—his tact was instinctive and almost perfect—yet always aware of the humor in any situation or the comedy inherent in a character. One of the chief joys of his presence was to hear his funny stories, and he was counted upon to deliver them in every kind of group.

Such a person must be born, not made. We can't become like him by trying. And equally, such a person must be made, not born. Who can say what would have become of his natural traits if the Cornell Library had not owned the set of Audubon that he says was his daily bread as a child; if Liberty Hyde Bailey had not told his puzzled father to let him go his way; if he hadn't met Elliott Coues "who badly needed an illustrator just as I got ripe," he said, and who indirectly brought his work to the attention of Abbott Thayer; if opportunities had not early and regularly come his way to travel and collect in remote parts of his country and the world?

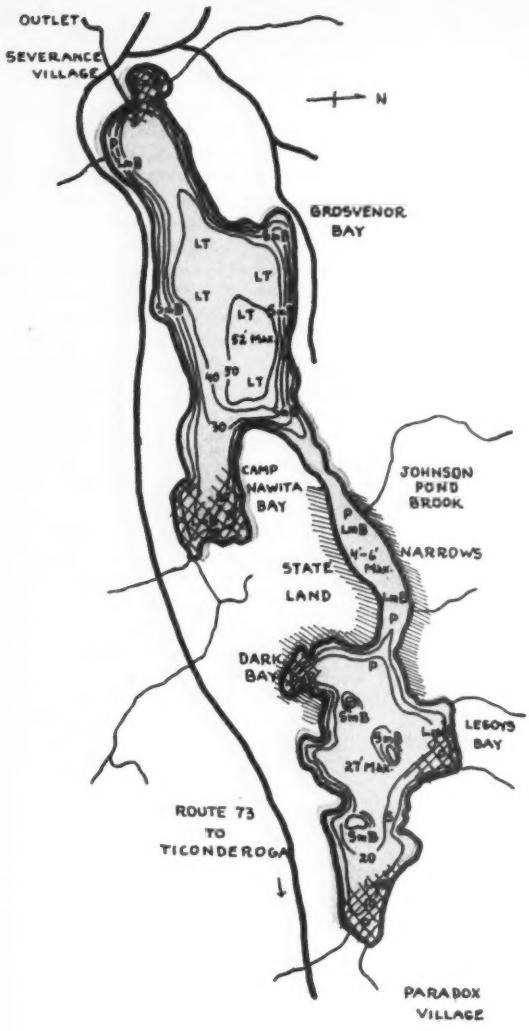
THE story is interesting. Louis was born Feb. 7, 1874, the sixth child of Professor and Mrs. E. A. Fuertes, in Ithaca. His father's family came from France and Spain by way of Puerto Rico; his mother's ancestors were of New York State Dutch and Connecticut Yankee stock. His father, Dean and Director of the new College of Civil Engineering at Cornell, was a very sociable, Latin-tempered, stern and tender teacher; his mother a serious and skilled pianist. I picture Louis as a child enjoying his mother's music, singing and whistling himself (he did both very well), harboring injured creatures and taming baby owls with his sister, Kippy, fishing lobsters' claws from the Sages' garbage pail (they lived next door and were rich—Mrs. Sage later gave the originals of *The Birds of New York* to the State); swimming with other boys in all the pot-holes in the gorges that cleave the hills around Ithaca. As a high school boy he used the hills for skiing, the valley of Six-mile Creek for botany collections, and began to keep spring lists of birds and to draw them, in order, he said, to know more accurately how they looked. A winter between school and college was spent in Switzerland, with sketching visits to the zoos in Paris. As an undergraduate in Cornell he made new and devoted friends, got terrible grades except in the zoological sciences and drawing, sang with the Glee Club, helped found the Cornell *Widow*, and in his senior year painted one hundred eleven pictures of birds to illustrate *Citizen Bird* by Mabel Osgood Wright and Elliott Coues.

There followed two glorious winters as Abbott Thayer's pupil and almost-son, studying painting with a master who was at the same time an ornithologist and the discoverer of new laws underlying the coloration of birds and animals. Louis was a kind of older brother and tutor to Thayer's younger children, and went with Mr. Thayer and Gerald, then 14, on his first southern collecting trip to the Indian River section of Florida in 1898. The year 1899 took him to Alaska with the Harriman expedition as the youngest member of the scientific party—John Burroughs was the oldest and they were "like two kids" according to Louis. In 1901 he went with Vernon Bailey of the Biological Survey to the Big Bend country of Texas, later with Dr. L. C. Sanford to the Magdalen Islands, with Frank Chapman to the Bahamas, the Cape Sable region of Florida, California, Saskatchewan, Yucatan, and to Colombia on two separate trips (1911 and 1913) to gather material for the habitat groups in the American Museum of Natural History in New York City. He did not go again on a serious collecting expedition until 1926, when he was artist to the Field Museum-Chicago Daily News trip to Abyssinia with Wilfred Osgood. Shortly after his return, on August 22, 1927, the car he was driving was struck by a train at a grade crossing and he was instantly killed.

His home was always in Ithaca. There he married Margaret French Sumner in 1904 and built the house on the corner of Thurston and Wyckoff avenues where his family lived for the next twenty-three years, and in which he did his painting until the separate fire-proof studio was built in 1913. Here he produced the drawings for Coues' *Key*, *The Birds of New York*, the frontispieces for *Bird-Lore*, more than a hundred pictures (many still unpublished) for the Biological Survey, the series of birds and animals that enlivened *The National Geographic Magazine* from 1913-1920, illustrations for almost every book on American ornithology appearing during those years, and pictures of special subjects for sportsmen and other friends. Near the end of his career advertisers discovered that pictures

Mrs. Boynton is the daughter of the artist, and is currently working on a book about him.

In the photograph, as well as on our back cover, are shown Mr. Fuertes' favorite subjects—birds of prey.



Paradox Lake

LOCATION: *Southeast Essex County.*

PHYSICAL FEATURES:

Area: 896 acres.
Elevation: 820 feet.
Maximum depth: 52 feet.
Length: 4 miles.
Maximum width: 0.75 mile.
Oxygen: Upper Lake (East Lobe) low bottom values. Lower Lake (West Lobe) good at all depths.
pH: surface alkaline—bottom acid.

GENERAL:

State campsite at Narrows.
Private campsites and boats available.

HUNTING IN VICINITY:

Woodcock.
Grouse.
Deer.
Bear.
Gray Squirrel.
Bobcat.
Coyote (brush wolf).

FISH PRESENT:

Northern Pike.
Smallmouth Bass.
Largemouth Bass.
Yellow Perch.
Lake Trout.
Salmon—occasional.
Lake Herring—dwarf form.
White Sucker.
Brown Bullhead.
Pumpkinseed.
Minnows.

FUR BEARERS:

Beaver.
Mink.
Muskrats.

MISCELLANEOUS:

The unique name of this lake stems from the fact that in the spring of the year what normally serves as the outlet of the lake temporarily becomes an inlet due to the backing up of the Schroon River. Thus the word "Paradox" is supposedly an Indian expression for "water flows backwards."

MARTIN PFEIFFER

Fuertes (continued)

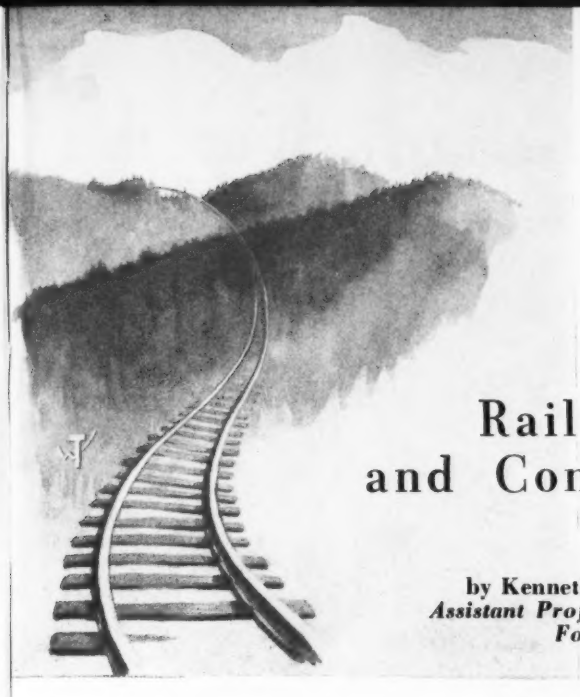
of birds were attractive, and he filled several orders of that kind.

He spent nine summers in a cottage at Sheldrake-on-Cayuga, and his winters' work at home during the years he was not on long expeditions was broken by attendance at A. O. U. meetings, hunting parties on Lake Erie or Fishers Island, an annual house party at Beach Haven with the hospitable Becks of the Philadelphia engraving company, and by lecture trips. He had no formal tie with Cornell until 1923 when he accepted a post as "resident lecturer" for a series of talks to be given each spring.

To the studio came neighbors, artists, visiting lecturers, hunters, professors, Alpha Delta Phi brothers young and old, Boy Scouts, drawn by the collection of pictures, birds, Indian curios as well as by the charm of Louis' personality. To the studio also came hundreds and hundreds of letters, many from children and young people. He answered them all, and two of the writers, seriously interested in learning to paint birds, were invited to come to Sheldrake and live nearby so he could teach them as he had been taught by Mr. Thayer.

His response to birds, and indeed to almost any natural phenomenon, was wonder—spontaneous, never flagging, uncontrolled. His response to people was an almost instant sympathy and present strong affection. He was sometimes angry at imposters and sentimentalists, but never perfunctory, never stale. The bond between him and a wealthy hunter differed greatly from that between him and an undergraduate in Hollis Dann's choir, or any child on a picnic at Sheldrake, but it was not therefore less secure. The street-car conductor and the man who framed his pictures would be reluctant to admit that they were less devoted to him than the men who knew him best—the Thayers, Allan Brooks, Wilfred Osgood, Frank Chapman.

In a deeply revealing letter to Chapman in 1917 Louis said that it was Audubon's love for the live bird that was so apparent to him in those "elephant" folios of his childhood that it kindled his own ardor to go and do likewise. That love for the live bird is what shows to a discriminating observer of Louis Fuertes' fresh work or the little of it that has been well reproduced. And the generation that he kindled with his own sense of wonder is not gone; he still sends us out of doors with a field glass in our hands to trace the singer of an unfamiliar song. Perhaps we will see small birds up among the leaves, and as one comes into the range of our glass recognize it all at once for a Purple Finch—a perfect likeness of Fuertes' Purple Finch in *The Birds of New York*.



Railroads and Conservation

by Kenneth C. Compton
Assistant Professor, College of Forestry

IT has been said that our railroads as we know them today would not exist were it not for our forests. While this is a point subject to conjecture, it was recognized even in the early days of our country that transportation meant expansion, and at the same time created conditions favorable for unity in defense and commerce. The concessions by the Federal government to railroads (mainly in the form of grants of land to encourage their development) is indicative of this early trend of thinking. Today, no country in the world exceeds us in mileage of railroad track.

Our railroads run on a wooden foundation. The wooden cross-tie has been the grid to which the ribbons of steel railroad track have been spiked for 120 years. In the early years of the development of the railroads, the wooden cross-tie was readily available from forests along the rights-of-way, and the trees selected were of the best available species. And it did not take long for the construction engineers to discover that white oak, black locust, chestnut, cedar, heart pine, cypress, and other durable species were the most desirable woods for cross-ties. But at the same time these species were valuable for other products, and by the early 1900's the railroads and the suppliers of cross-ties began to understand that they were going to be at a great disadvantage if other woods, less resistant to decay but just as well fitted physically, were not modified so that they might be used.

Thus, almost unconsciously, and at first purely for self-protection, the railroads and the wood preservation industry embarked on a program of wood conservation. Today, the railroads are still the largest users of preservative-treated wood. It is estimated that several billion board feet of wooden products would have had to be removed from the forests of our nation if wood preservatives had not been used to prolong the life of existing material.

The railroads annually replace approximately 30 million cross-ties because of decay or mechanical failure. This number represents only about one-thirtieth of the cross-ties in Class I and Shortline railroads. If it were not for the preservative treatment given these ties, we could expect between 5 and 10 years of useful service instead of the 30 we now enjoy. In other words, instead of our present annual drain on our forests of slightly over a billion board feet, we would be using three to five billion board feet per year for cross-ties.

Whereas at one time the cross-tie purchaser filled his needs from first quality timber of a few and highly desirable species, he now uses species from every forest type. The once lowly black tupelo and sweet gum of the South have developed into one of the principal cross-tie woods. In New York State oak cross-ties are still the most common, but maple, beech, and birch are also used. Whereas 40 years ago a third of all cross-ties were produced from the white oak species, the red oak is now the principal species used. Almost every stand of timber has some trees which are suitable for cross-ties, and this fact should be kept in mind in planning the timber harvest. Many trees that would produce logs suitable for cross-ties are left behind when the timbered areas are logged, simply because they do not appear to be of a high enough quality for economical harvesting and processing. And at the same time much good material in short upper logs is left in the woods, although these may be of sufficient size and quality to grade as No. 3 logs—from which an acceptable cross-tie may be processed.

Over the years, numerous substitutes have been suggested to replace the wooden cross-ties. Legislation has been proposed that would have gradually eliminated them from our railroad lines, and several materials have been advanced as superior to wood, and innumerable designs proposed. The two principal substitutes, concrete and steel, have been used with some success, but each has at least one property which places it below the all-around excellence achieved by wood:

A pre-stressed concrete tie is the latest proposal from the inventors' stock of ingenuity. This tie does not compete with wood in our country in cost, resiliency, and ease of fastening the rail to the tie, but it is significant that a country whose timber supply has been seriously depleted by two world wars is in such a position that this type of cross-tie is being promoted.

The steel cross-tie has many good points. It has been used successfully both here and abroad, but in this country principally on an experimental basis. So far, the cost-in-place of a steel cross-tie far exceeds that of the wooden tie, and we have no conclusive evidence that the annual charge against steel ties would be less that of the wooden type.

It seems that if we were able to look ahead far enough we might find technological advances in the processing of materials which would fit these materials for use as cross-ties at an economic advantage. We must remember, however, that there are wood-products researchers who are studying how to prolong the life of our wood cross-ties. Better design of track plates, pads under the plates (or hard wood inserts), dowelling, anti-check seasoning, and many other projects are under investigation today. And all of them are aimed at prolonging the life of the tie and reducing over-all costs.

IN any case wooden cross-ties will remain on the list of potential forest products, and we can look forward to our trains running on rails laid on ties of wood for many years in the future. That being so, to assure that our transportation system continues at its present high level of efficiency in peace or war, we must for the present and foreseeable future concern ourselves with a very particular aspect of the wise use of our forests.

The Striped Bass in New York Waters

by Edward C. Raney,[1] ***Professor of Zoology and Fishery Biology, Department of Conservation, Cornell University***

[1] *The author served with the U. S. Fish and Wildlife Service as co-ordinator of the Federal-State Striped Bass Research Program during the period February-September, 1953, while on sabbatical leave from Cornell University. Additional up to date information on the striped bass may be found in the study "The Striped Bass,* Roccus saxatilis*" published by the Bingham Oceanographic Laboratory, Yale University, 1952, Bull. 14(1): 1-176, and in the paper "Racial Investigations of the Striped Bass,* Roccus saxatilis *(Walbaum)" in the Journal of Wildlife Management, 1953, Vol. 17(4): 495-509.*

THE New York Conservation Department, under the Dingell-Johnson Federal Aid program, is about to embark on an investigation which will reveal badly needed facts about the basic biology of striped bass in New York waters. It is hoped that information will be obtained on the source of the bass stock in the Hudson River and Long Island waters; the abundance and rate of exploitation so as to determine whether the stock of bass is adequate to support the present level of sport and commercial fishing and to develop improved management for the species. The study will also continue to investigate the racial characteristics of the bass found in the Hudson River at the several seasons, reveal the value of the Hudson River as a wintering area, give information through tagging on local and seasonal movements, on location of spawning and nursery grounds, and obtain data on age and growth, and on length and sex compositions of the schools. It is of great interest that a study will begin of this important sport and commercial fish at a time when the stocks are plentiful—perhaps as plentiful as any time since 1936. Before this time the stocks had fallen to an all time low. While the study will emphasize the Hudson River and Long Island waters, it will be conducted as part of a co-ordinated coastwise investigation, which as now planned, will involve studies conducted by seven states as well as the U. S. Fish and Wildlife Service. Each state will emphasize its local problems but since the striped bass is a migratory form, the answers to many problems may be obtained only by a co-ordinated effort. Together with New York, the States of Massachusetts, Connecticut, New Jersey, Maryland, South Carolina and Florida have begun, or will start research programs in the spring of 1954 and most of the studies will extend over a three-year period. It is probable that other states will also begin projects within the year.

It seems appropriate at this time to summarize what is known about the striped bass as pertains particularly to New York State and the relation of these stocks to striped bass found elsewhere along the Atlantic coast.

The striped bass is a tolerant and wide-spread species which is distributed along the Atlantic coast from the St. Lawrence River to the St. Johns River in northern Florida and in the Gulf of Mexico from western Florida to Louisiana. From Delaware southward it is commonly known as rock or rockfish. Its adaptability is attested by its successful introduction, in the last quarter of the 19th Century, into waters of San Francisco Bay. It is an important sport fish in that vicinity at present, has spread and is now distributed from southern California to the Columbia River. On the Atlantic coast, adults are found in salt, brackish and freshwater, but in salt water they seem to be coastwise in distribution and few are known to have been taken more than ten miles from shore. Freshwater groups usually consist of stragglers or of spawning groups which are usually found near the mouths of rivers just above brackish waters. However, in some cases they may move far upstream to spawn and at times may even be found as much as 200 miles from salt water. Occasionally striped bass move upstream through locks into strictly freshwater situations such as the Mohawk River, New York or the Santee-Cooper Reservoir, South Carolina. Striped bass also have been stocked in small freshwater ponds where they may be of local importance as a fishery but where there is, as yet, no evidence of spawning.

Most stocks of striped bass make two types of migration. One is an upstream or anadromous migration into fresh river waters. Probably most of this type of migration takes place in the spring, although it is probable that some schools which have moved upstream to overwinter in the Hudson and elsewhere may remain to spawn. The actual time of the spring migration for spawning purposes may range from early April in Alabama to early July in New Brunswick. On the mid-Atlantic coast spawning occurs mostly in April and May. Heavy fishing pressure on the spawning grounds does not necessarily result in depletion of stocks since the reproductive potential is high. The Roanoke Rapids near Weldon, North Carolina has been a famous fishing grounds during the striped bass spawning run for many years. After spawning, some stripers may remain in the rivers but most apparently drift down to salt water where they are usually the subject of an intense fishery along the shore.

Another type of migration which is by far the most spectacular apparently involves striped bass two years and older that travel in huge schools. This migration which is apparently not associated with spawning activity occurs in the spring. Some of the bass move out of wintering areas, such as Chesapeake and Delaware bays (and to a lesser extent New Jersey and Long Island bays), and travel northward. These bass are the object of an intense fishery as they hit off southeastern Long Island (Montauk Point), eastern Connecticut, Rhode Island, Massachusetts and New Hampshire. From tagging studies based largely on the very successful 1934 year class it seems that most of these migrating striped bass originated in tributaries of Chesapeake Bay, or other southern areas. It is probable, however, that only a small percentage of the total number of Chesapeake Bay striped bass is involved in such migrations. Nevertheless it is obvious that a very successful spawning and survival of young in the Chesapeake Bay area may have a pronounced effect on the number of striped bass present at distant points along the coast.

It seems probable that the northern populations, such as are found in the St. Lawrence River, and in local situations in New Brunswick and Nova Scotia, are more or less indigenous. This may also be true of most of the striped bass populations found southward from southern North Carolina, although little research has been done in these areas. Apparently no such coastwise migration occurs on the California Coast although recent study indicates a fall migration into the freshwater Sacramento-San Joaquin Delta where they remain during winter. In the spring they disperse out over the delta and into tributary rivers to spawn, after which they return to San Francisco Bay and adjacent salt and brackish waters for the summer.

ON the Atlantic coast there is a reverse movement in fall, during October and November, as the bass move southward to their overwintering grounds. Although the bulk go to Chesapeake and Delaware bays, some segments break off and winter in southern New Jersey and occasionally even farther north. For example, during January to March, 1938 bass were known in Shinnecock and Moriches bays, Long Island. Apparently few go as far south as Albemarle and Pamlico sounds, North Carolina. The data on the migration of the Chesapeake-Delaware race are from the excellent studies of Daniel Merriman, Yale University carried on in 1936-37. These migratory routes as well as summer and winter occurrence are shown on maps in THE NEW YORK STATE CONSERVATIONIST for June-July, 1952 (Vol. 6, No. 6) which is available as reprint number 42.

Some segment of this southward moving mass of striped bass overwinter in the lower Hudson River, especially in the vicinity of Haverstraw. Moreover, recent studies by the author and colleagues have shown that the Hudson River is an important spawning area for striped bass and the stock of bass produced therein is of importance to the fishery, especially the sport fishery, in and about New York Harbor and in the western end of Long Island Sound. The evidence comes from two investigations: First, a study of counts of fin rays made on young striped bass from the Hudson and from the

Delaware and Chesapeake bays and second, a knowledge of migration of bass into the Hudson obtained from a study of tag results which has just recently been completed. Counts of the number of soft fin rays of the dorsal, anal and pectoral fins of young striped bass, especially for the 1949 and 1953 year classes has shown that is possible to separate a high percentage (80) of bass which originated in the Hudson River from those which were reared in the several tributaries of Chesapeake Bay. This pronounced difference in number of fin rays indicates that the Hudson River striped bass do not freely mingle and spawn with the Chesapeake-Delaware segment of the population which on occasion may be present in the Hudson. Limited data on fin ray counts of adult striped bass indicate that the two races come in contact at other times, especially during the spring and fall migrations.

FURTHER evidence that Hudson River striped bass are a separate race was obtained from an analysis of tag returns obtained mostly for bass under 16 inches in total length, from the Schaefer-Salt Water Sportsman tagging program carried on from 1949 to 1952 and the results are of especial interest to residents of New York State.

During spring, summer and fall several thousand striped bass were tagged in the western quarter of Long Island Sound, mostly in the vicinity of Greenwich, Conn. Out of 508 recoveries of bass originally tagged in that area, 70 per cent were retaken in the Hudson River, 25 per cent were recaptured in the western quarter of Long Island Sound, mostly close to the area where they were originally tagged, and only 5 per cent were recovered from other localities. Similarly, of 129 recoveries tagged originally in the fall of the year in Lower New York Bay, at the Narrows, and in Upper New York Bay, 98 per cent were retaken upstream in the Hudson River, mostly during the following spring. The remaining 2 per cent were recaptured in New Jersey but none of the latter was taken farther than fifty miles from the point at which they were originally marked. Other recaptures from fishes tagged on Long Island and in northern New Jersey near the mouth of the Hudson indicate that some of these fishes moved up the Hudson and others moved either southward in the fall or northward in the spring indicating a mixture at these points of the two races (Hudson vs. Chesapeake-Delaware).

Because of the several races involved and the migratory nature of the striped bass which may travel through the waters of several states, management presents a rather complicated problem.

The precise spawning grounds in the Hudson River are as yet unknown but where studied elsewhere spawning is known to occur in freshwaters. The number of eggs produced varies with the size of the female; some 14,000 are laid by a three pound female, as many as 250,000 by a five-pounder and nearly 5,000,000 are produced by a fifty pound specimen. Some females reach maturity at four years of age; virtually all are mature at six. Most males are mature at two and all are mature at three.

The eggs are known to be deposited near the surface during the splashing which accompanies the so-called "rock fights" where a single large female may be surrounded by a few or as many as fifty males. The eggs which are spherical, non-adhesive and slightly heavier than fresh water, drift slowly downstream or move with the currents until they hatch or reach a resting place. The incubation period varies inversely with temperature but is approximately forty-eight hours at 64° F. Most spawning occurs when water temperatures range from 58° to 70° F., and in the Hudson River the spawning season evidently includes May.

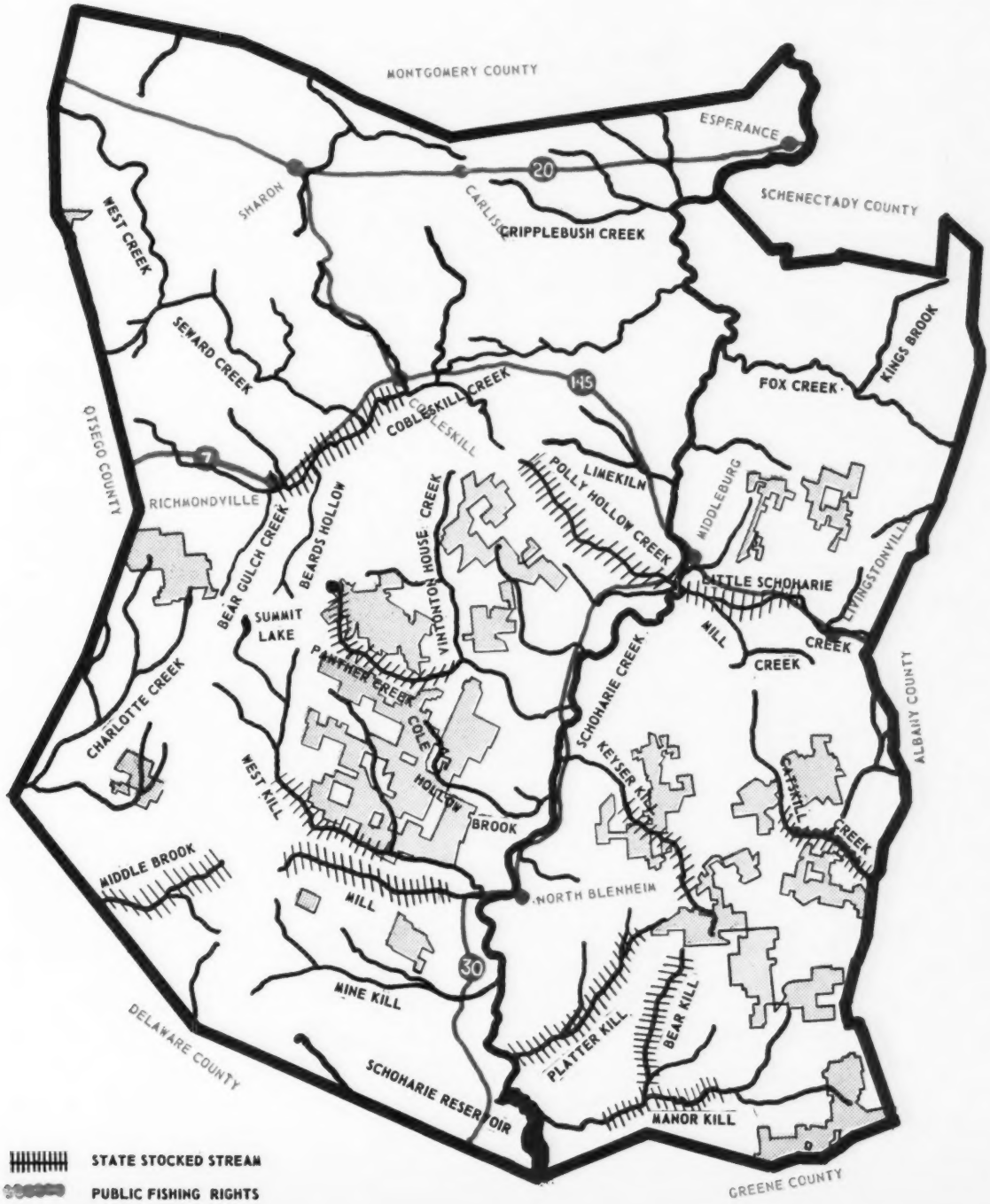
During the first summer the young congregate in small schools and feed on freshwater shrimp, insect larvae, small worms, an occasional small fish and similar small organisms. Young may be observed in the Hudson River at such places as Coxsackie and Haverstraw beaches where they seem to prefer sand bottom and some current. The schools numbering usually up to 15 or 20 individuals do not usually mix with other species such as shad, river herring, killifish, or white perch which are often present in the area. That young may be relatively widespread in the Hudson River is known from the work of the Biological Survey which actually took young striped bass at 67 localities during 1936. A survey of young present in the Hudson River made by the author and Wm. S. Woolcott during September, 1953 indicate a goodly supply from a successful spawning. The same is true of many of the Chesapeake Bay tributaries such as the Patuxent, Rappahannock and Pamunkey rivers, surveyed in late August.

THE intensive Biological Survey carried out during 1938 showed the streams and bays of Long Island are not important for spawning or as nursery grounds for young striped bass. Indeed, young bass are rarely found there.

At the end of the first summer the young are from two to five inches in total length. In succeeding years the juveniles still tend to school and gradually switch to a diet of fishes and large invertebrates. Many kinds of fishes are eaten but the silversides, menhaden, killifishes, anchovy, spot and croaker are favorite foods. Apparently the members of schools feed periodically and at about the same time. The rate of growth may be assessed by a study of the annuli which are formed on the scales in the early spring, and on other structures such as otoliths ("earbones") and opercle (gill cover). It is difficult or impossible to age specimens more than ten years of age using scales. The data on growth of striped bass in the Hudson obtained by Dr. John R. Greeley during the Biological Survey of the lower Hudson Watershed made in 1936 are based on relatively few specimens but are given as follows: During the second summer 5.4-6.7 inches in total length; in third summer, 10.6-11.8 inches; in fourth summer, 13.8-18.3 inches; sixth summer, 17.6-20.3 inches and seventh summer, 18.7-22.4 inches. In the seventh season the weight is from three to four pounds each. In the past specimens weighing sixty pounds and upwards were caught in spring in the Hudson River. Formerly striped bass were known to reach a top weight of about 125 pounds but at the present time most of those caught by anglers along the Atlantic Coast are less than 55 pounds in weight.

The striped bass has fluctuated considerably in abundance over the years. It is a species that is subject to the so-called "dominant year-class" wherein an age-group may dominate the population—and catch—for several years. For example the stock in the Chesapeake Bay area was at a very low level in 1934 but due to a combination of favorable factors influencing spawning and survival the 1934 year-class was the largest to be produced in the preceeding half century and produced good fishing in 1936 and 1937. Indeed it seems probable that some of the very large bass caught in recent years may be the survivors of the 1934 year-class. An irregular series of good year classes, such as those produced in the Chesapeake region in 1940, '42 and '43, have followed and account for the generally excellent fishing enjoyed at present. Thus a knowledge of successful spawning in Maryland or Virginia in 1953 or any other year may be of great interest to a striped bass fisherman of Montauk Point. Also the success of a year class in the Hudson River may have an important bearing on the quality of fishing in western Connecticut and northern New Jersey. The consideration of such factors is a necessity if this fine fish is to be managed so as to provide the maximum "wise use," both economically and socially.

Schoharie County



The Big Moose Lake Program

LIKE many other Adirondack lakes, Big Moose Lake originally had a good population of lake trout, brook trout, suckers, whitefish, bullheads, sunfish and various minnows. Good fishing was enjoyed and fish population of the lake remained basically unchanged for many years. A few years ago, however, bass made their appearance — apparently planted by a well meaning person.

For a time the bass flourished and good catches were more the rule than the exception. But as the bass flourished, the brook trout population decreased and then quickly, and without explanation, the bass disappeared. Between 1942 and 1953 only one bass was known to have been caught out of the lake, and none were taken during the extensive nettings and seinings of the past few years.

A year or two after the bass disappeared, yellow perch made their appearance; probably introduced as minnows set free or escaped from someone's bait pail. The brook trout and lake trout population went down again as the perch increased very rapidly.

Now, many will say the perch is a fine fish, and nothing to worry about. But it is hardly the fish wanted in Adirondack trout waters. Experience has shown that, in most cases, it soon drives out most other species and then proceeds to keep on multiplying until there are too many for the food supply and the result is a lake full of stunted perch all four to six inches long.

In view of the increasingly bad state of fishing in the lake, the Big Moose Fish and Game Club asked the Conservation Department, through its Adirondack Fisheries District, to make a scientific evaluation of the problem.

Sample nettings confirmed the worst— brook trout and lake trout populations were below normal and perch were on a rampaging increase. Members of the Club decided that the pleasure of good fishing to summer and year 'round residents, and the importance of good fishing to the resorts on the lake warranted a determined try to return the lake to its former fish population.

The Department's Adirondack Fisheries District was asked to submit a Fish Improvement Program extending over a three-year period, outlining plans for work to be done and recommending phases of the work to be carried out by our Fish and Game Club. Since no proven method had been found at that time for dealing with perch in a lake the size of Big Moose (1,175 surface acres, with depths running to over 90 feet) this Program was submitted to the Club as experimental and as such received the approval of the Club. It was felt that we had a reasonable chance of reaching our goal, but if the experimental program was not entirely successful here, then perhaps the information secured at Big Moose might be of vital importance at some other lake with a similar perch problem. Something had to be done and we chose the best course available.

Since the regular membership of the Club is just over 30, and the Program called for Club participtation to the extent of $1,500 the first year, the Big Moose Property Owners' Association was approached for their approval and help. Aid was forthcoming immediately and the Program was started in the spring of 1950.

The aim of the Program was, and is, the improvement of fishing in Big Moose Lake through reduction of the perch population, and at the same time the improvement of fishing in the ten tributary lakes and streams emptying into Big Moose.

Since perch regularly spawn in certain shallow areas of the lake it was decided that the best chance of reducing the number of perch was in removing the spawn. Netting had been tried in much smaller lakes and had proven fruitless. The spawn was removed manually, with the aid of an assortment of "tools" that included a garden rake, a large food strainer, pike pole, and two men willing to work in ice water and during the nastiest weather of the year. Perch start spawning in Big Moose about a week after the ice goes out and the weatherman can, and does, provide a bewilderingly rapid mixture of sunshine, clouds, rain, snow, and biting wind. The Secretary-Treasurer of the Club, Bob. Burkhart, has been in charge of this spawn removal work for the past three years and has done a very thorough job.

Following, in outline form, are the highlights of the Program to date:

1950—Perch spawn removal started, (takes about fourteen days' work); aquatic biologist and assistant hired for the entire summer to do basic research on Big Moose Lake and all tributaries emptying into the lake (included chemical analyses, nettings, seinings, depth and temperature readings, and oxygen content of the water); start of experimental plantings of two strains of lake trout (Seneca Lake and Saranac Lake); stocking of red salmon.

1951—Perch spawn removal continued; test nettings and seinings (to determine status of perch population, especially young that might have hatched from 1950); tributary pond reclaimed (eradication of perch from tributaries necessary to control in Big Moose Lake); laker plantings continued; legal-sized brook trout planted experimentally.

1952—Perch spawn removal continued; laker plantings continued; nettings and seinings continued; tributary pond restocked with brook trout and opened for fishing.

At the end of 1952 the results of the nettings and seinings showed that the normal hatch of perch had been lowered considerably and increasing numbers of brook trout and lake trout were in evidence. It was decided to extend the Program for another three years.

1953—Perch spawn removal continued; experimental laker plantings continued; nettings and seinings continued; a beaver survey of the lake and its tributaries was conducted.

Other parts of the Program included removal of beaver dams, fish plantings (by airplane and boat), transportation of men and materials for various projects, and other allied works.

In the spring of each year the Club has put out an annual report of the preceeding year's work, complete with financial statements and proposed budget for the coming year, a report by the Fisheries District, and a report and commentary by Club officers. The 1952 report contains some 35 pages, including two full page pictures and eight other pictures. These reports are sent to all Club members, all persons contributing to the Program, and a few other interested persons. The reports are a most generous contribution of the Club President, Karl A. Adams, Auburn, without whose drive and experience the Program would hardly have been started or continued successfully.

The end of 1953 finds all waters tributary to Big Moose Lake free of perch, and containing only such species as were in the waters originally. Chemical content of some of the tributaries is naturally poor, and in others bad chemical condition seems to be due to beaver action. It is hoped that some of these may be improved further. Big Moose Lake has a definitely decreased perch population, and a positively increased trout population, both brookers and lakers. The other "native" fish are also showing a marked increase. The perch may be expected to decrease further and trout increase proportionately, although the limits of improvement are not yet predictable. We feel that we have made good headway in the time we have spent on a lake the size

of Big Moose -- which really is *big*.

During the four years that the Program has been underway a total of $3,960 in money has been contributed. The largest percentage of this has been contributed by residents, summer and year 'round, and the appreciable balance by guests and interested friends. All boats and motors used by the Club, and those needed by the Fisheries Districts from time to time, have been contributed by Dunn's Boat Livery on Big Moose. Other contributions include signs, lumber, dynamite, various tools and other miscellaneous equipment. Almost every member of the Club, and a good many who are not on the regular membership rolls, have contributed generously and constantly of their time and labor in planting fish, carrying equipment, and aiding in pond reclamation. Members of the Conservation Department have been accommodated at local resorts in order to lessen their travel time and thus expedite work, all of which would add up to several thousand dollars more.

As an integral part of the Program, the Club, with the co-operation of the Herkimer County Sportsmen's Unit, has worked successfully to have the Town of Webb, Herkimer County included under the provisions of the Graves (live bait) bill, and has co-operated actively with the Division of Lands and Forests helping to open "blow-down" trails in the area. To round out activity for the Club's motto, "Promote Fishing, Protect Game, Preserve Forest," the Club has employed a Special Game Protector for the past three hunting seasons. His salary has been paid out of Club dues, funds from benefits, and contributions.

The Club is most grateful for the active co-operation of the Conservation Department, as exemplified through the Fisheries Districts, Game Managers, Foresters, and Game Protectors with whom we have had the pleasure to work rather closely. Our efforts and expenditures have been outweighed many times by those of the Department, from the men who pull seines to those who have helped guide the Program from its start. The aquatic biologist hired in 1950, Bill Pearce, is now assistant to Donald Pasko, Senior Aquatic Biologist of the Watertown Fisheries District, and since we are now in the Watertown District we have been fortunate to have "our own" biologist back with us again from time to time. Our sincere thanks go to Dr. W. Mason Lawrence who has so ably guided the Program and to his successor in charge of the Adirondack District Office, Bob. Zilliox. The Department has supplied such technical equipment as was needed, provided the best practical advice on how to plant fish efficiently, travelled many miles in summer and winter for discussion of program problems and policy, and answered calmly and patiently at least a "million" questions and theories tossed to it by Club members, interested contributors and bystanders.

The fishing at Big Moose Lake HAS improved, and the Fish and Game Club, Property Owners' Association and area resort owners and visitors are to benefit directly from this. The Conservation Department has gathered a wealth of data on Big Moose and its environs, and valuable information on possible methods of perch control.

But perhaps most important, the Program seems to be a good example of how co-operation, generosity, and a calm, reasonable approach by all may work to overcome a problem too large for any one group.

—William L. Judson, Vice President,
Big Moose Fish & Game Club

•

IN the accompanying article Bill Judson describes an interesting and unique project. The persons interested in Big Moose Lake faced a problem—their lake was as beautiful as ever but the fishing for which it was once well known was all but gone. They decided to do something about it.

Their first approach was a familiar one. They asked the Conservation Department if heavy stocking would not bring back the type of fishing they had enjoyed formerly. When informed that stocking in similar situations had not given satisfactory results, they immediately countered with two questions: What should be done then? What could they as an interested group do to help?

After several discussions in which their determination to do something constructive was very evident, a suggested program for the improvement of fishing in the lake was submitted to them. They put the program into operation at once on a three-year basis. The first three years' work has been completed now and they have extended the program for another three years. The details of the work and the results observed to date are set forth in the accompanying article. Big Moose is still not a fisherman's paradise. It appears fair to say, however, it is on the road to recovery.

The important point, in my opinion, is that a great deal of constructive work has been accomplished in Big Moose and its tributary waters due in large part to the efforts of two local groups—the Big Moose Fish and Game Club and the Big Moose Property Owners' Association. The Conservation Department has participated in the work as it does in all bodies of water open to the public. But the Department with responsibility for the many lakes and streams in the State could not unaided have carried out as intensive a management program on an individual water. It proves again that in this era when conservation problems are many and great that much more progress can be made if all interested parties pitch in and help rather than leave the whole job to a governmental agency.

—W. Mason Lawrence

Verplanck Colvin
Superintendent N.Y.S. Land Survey

THE simple paintings on our cover, as well as some of the drawings reproduced on these pages, were the work of Verplanck Colvin. Colvin was an amateur artist, a professional surveyor, and in varying degress a topographical engineer, geologist, biologist, geodesist, historian and writer. He is best known, however, as Superintendent of the Adirondack and State Land Surveys, and in that capacity he left a deeper and more enduring mark upon the North Woods than any man before or since. That mark can still be found in the copper bolts, set in the oldest stone in the world — Adirondack granite—and in the old blazes which are still prime reference points in discovering and rediscovering Adirondack property lines.

The earliest map to show the Adirondack region was one drawn by Abraham Oretlius, geographer for Philip II of Spain, in the year 1570. Northern New York was then called "Avacal;" the lack of knowledge about this region was evident in the cartographer's work. Then came a map of New Netherland, dated 1616, which gave to the area the name of "Irocoisen," changed in later editions to "Iroquoisia." Then in 1771 appeared a map ordered by Governor Tryon, but this did not indicate any lake or mountain in the Adirondacks—only an unknown wilderness. Next, in 1776, a map of the British colonies reported that the vast tract to the north was called "Couchsachrage," one of the four beaver hunting countries of the Six Nations and not yet surveyed. Finally, a map dated 1777 sketched in Tryon and Charlotte counties, and also attempted to trace the Hudson River and to suggest the location of a few of the major lakes.

With such meager information at hand, colonial surveyors had little to work with. Nevertheless, they established the boundaries of the Totten and Crossfield Purchase—one of the first recorded surveys of the north country; the south line of Macombs Purchase Great Tract #11; the south line of Great Tract #1; a resurvey of Township 11, Old Military Tract, and such other surveys as were required by the commissioners of the Land Office.

All of this was piecemeal work, and it was not until 1837 that a large scale geological survey was started by Professor Emmons, assisted by William C. Redfield and Ferdinand M. Benedict. That survey continued for four years, and during the course of it many of the major Adirondack peaks were named and measured, among them Whiteface, Marcy, Seward, Dix, McIntyre, Henderson and McMartin (later Colden). Although conspicuously inaccurate in many respects, the reports of this survey summarized virtually all of the knowledge of the topographical and physical character of the region of the State up to that time, and for that matter, up to the year 1872 when Colvin embarked on his project. Between the Emmons survey and that of Colvin, there appeared only fragmentary and sketchy information, some of it published and some not, some of it reliable and some not, circulated by tourists, hunters, guides and miscellaneous authorities who visited the Adirondacks.

Suffice it to say that when Colvin began his land survey he had very little established and authentic material to work with. There was no reliable map; blazes and stakes and other boundary markers had in many cases disappeared. Lines delimiting State and private properties were often a matter of opinion or guess work, and there was nowhere in the records of the State a total picture, even approximately accurate, of the topography and geography of the region.

Colvin was convinced that to remedy this situation nothing would suffice but "A survey with theodolite or transit, entirely independent of the magnetic compass, the object in view being the discovery by trigonometrical measurement of the relative angular position of the mountain summits and other important land marks for use in the preparation of a map of the wilderness." And he went on to say that "the vastness of such an undertaking necessitated the retraversing of so great an extent of wilderness, the ascending of numerous mountains several of which have a height of 5,000 feet, the labors and fatigues, the

dangers of exploration in the great ocean of woods, of accident and of hunger, can only be appreciated by the surveyor who has passed through such an ordeal."

Even so, Colvin probably underestimated the difficulties of his job. Field work began in the neighborhood of Lake Pleasant (Hamilton County) in late July, 1873, and right at the start appeared the difficulties which were to plague him throughout the survey. Some of these were of his own making, some were unavoidable.

The difficulties of his own making appear to have stemmed from the character of Colvin himself; he simply could not be bothered with many of the details necessary to the organization and administration of such a project. Therefore, he and his men often had nothing to eat but dry bread, no prepared camp to sleep in, no adequate provisions to take care of the delicate instruments required for the work, no definite schedule of activities nor any well thought out itinerary, no competent leader to take Colvin's place when he left the job and went back to Albany (which he frequently did), no overall objective which could be communicated to his men so that they might share his enthusiasm for the task.

On the other hand, many of the difficulties encountered by Colvin were the products either of his times or of the officials in Albany to whom he was responsible. His surveying instruments — although he insisted upon the best available and usually got them—were primitive according to present standards, and the support he received from the Legislature was to say the least precarious. In more than one instance he had to resort to his own personal funds in order to pay his crews, and the completion of his survey was indefinitely postponed due to lack of appropriations by the Legislature. A combination of his own shortcomings and those of the government for which he worked often resulted in poorly outfitted crews, unnecessary suffering, defection in the ranks, failure of instruments, false alarms and excursions, disease and hardship.

Furthermore, Colvin confronted many of the problems which beset surveyors in the same field today. There was a maize of trails and blazes made by hunters, trappers and lumbermen for their own mysterious purposes, and it was necessary for him to sort out the wheat from the chaff before establishing what he considered to be the true line. And to cap it all, there was the annual variation of the magnetic needle, as well as minor variations caused by ore deposits. Such mechanical difficulties were particularly trying to Colvin and were perhaps the cause of some of his major mistakes, since he had a profound respect for the lines established by previous surveyors and often stretched a point to prove them right.

In the course of gathering material for this article, we contacted two men who had worked for Colvin. One of these, Beecher Wilson of Deerland, helped Colvin to run the line between Townships 21 and 25. Significantly, he pointed out that the actual survey work was headed by Dan Lynch, since Colvin "wasn't there too much of the time. I helped find the old line trees," he said, "cut out sections of them, put them in a pack, carried them out. We were blocking out old blazes. Mr. Colvin had no idea of time, and no thought of comfort; he would lie right down on the ground and sleep just as well as he would in a feather bed."

We got the idea that when Mr. Wilson said he worked for Colvin, he meant to say that he really *worked*.

We also found James M. DeLong of Elizabethtown, who worked for Colvin during the summer of 1885. "I heard he wanted rodmen," Mr. DeLong said, "so I sent him a letter and he told me to come on. I acted as rodman some of the time, and chainman some too. Mr. Colvin was a very fine man, but he was a very obstinate man. I can't remember how many there were in our party, but anyway there was a head cook, camp man, 2 rodmen, 3 chainmen, and 3 or 4 axemen, in addition to the instrument men and their assistants. While our party was at Placid, Colvin was away a great deal of the time."

The remarks of these two men seem to confirm a rather general impression of Colvin's character; that he was highly volatile, or as one historian put it:

(continued on page 23)

Surveyors were distinguished from axemen by the type of headgear; bowlers were standard equipment for the intelligentsia of the crew

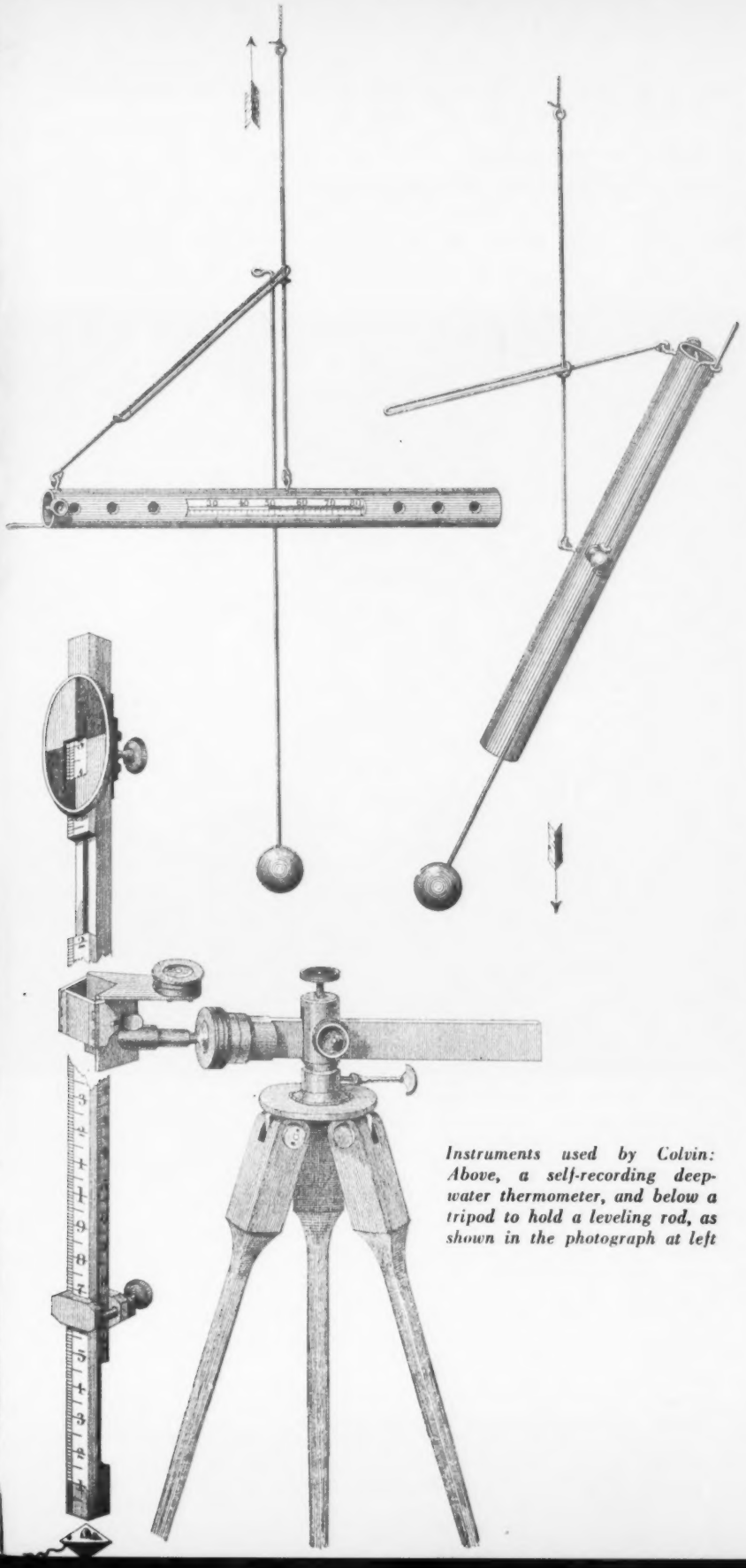
Top left: A blaze "blocked" out to determine its age

Top right: "Taking morning observations" after a snow storm in October, 1883

Above: Orson P. Morse and his crew, with Snowy Mountain in the background

Right: Frock coat and polished boots on the shore of Lake Placid

Far right: Trouble with blackflies at the joint corner of Townships 34, 35, 6 and 40, Totten & Crossfield Purchase



Instruments used by Colvin: Above, a self-recording deep-water thermometer, and below a tripod to hold a leveling rod, as shown in the photograph at left

"When the high mountains had been measured and the location of lakes and the sources of the major rivers determined, the glamour wore off and his reports lost most of their popular appeal." The critics over the years have found much of his work to be of uneven scientific value. Resurveys have proved many of his lines inaccurate (he tried so hard to prove old lines correct); his successors could do little with the great mass of material he accumulated for the simple reason that he had no organization or system for handling such material; his Albany office is said to have looked more like the dressing room of a sporting club than the office of a surveyor, what with its confusion of pack baskets, snowshoes, trophies and bric-a-brac.

Nevertheless, there seems to be general agreement that as a surveyor Colvin was tops. As Mr. Wilson of Deerland said, "Colvin was one of the greatest men I ever saw to locate a spot on a tree. He could locate one that you couldn't see any sign of—one that might be 5, 6 or 7 inches grown over. But he could see it, and we couldn't."

Colvin was born in Albany in 1847, was tutored at home, later attended Albany Academy, then studied law, then developed a taste for the sciences. First practical application of the latter was on the headwaters of the Sacandaga, where he made mining surveys, studied geology and in general interested himself in the physical aspects of his environment. He taught higher surveying, geodesy and topographical engineering at Hamilton College, published over 30 volumes of notes and records, and in 1920 died in an institution in Troy seriously crippled in mind and body. He had never married.

The bare facts about Colvin's life do not suggest the importance which he assumed in making and writing the history of the Adirondacks. During the course of his professional activities, he evidently did a great deal of constructive thinking about the future of our State and its citizens; he was one of the first, if not the first to suggest the idea of the Forest Preserve, and in 1872 he became secretary of the State Park Commission appointed to investigate the possibilities of creating such a preserve. He did much of the work of this commission, and wrote its reports.

But when Colvin retired from the Adirondack survey, the dreamer in him supplanted the surveyor; he became president of the New York Canadian Pacific Railway, an organization that never progressed beyond the paper state, and when this failed he retired from public life to live and die in seclusion.

—Roland B. Miller

Survival

by William H. Wadsworth,
Assistant Scout Executive, Onondaga Council, Inc.

The survival kit contains 51 items (24 of of them different) but weighs only 7½ ounces. Among items are chocolate bar, malted milk tablets, bouillon cubes, whistle, pencil and paper, matches, fire-starters, knife, fishing equipment, wire, cord, first aid equipment.

SOONER or later it happens to all of us. Your turn may come up next year, next month, or tomorrow. What have you done to prepare yourself for such an experience? Every year we pick up our newspapers to learn of some hapless sportsman who found himself lost in the woods with or without companionship, with or without food and equipment, and with or without "know-how." The results are usually very uncomfortable and sometimes fatal.

As I read these headlines they bring back vividly an experience which happened to me up in the Chateaguay Lakes section several years back. A young fellow from a nearby camp had gone out alone the previous morning, and when he had not returned by nightfall, a call for searchers went out to all the camps on the lakes. As so often happens, little was known of his hunting plans. Valuable hours were lost as we waited to start the search at daybreak the next day. Our gang divided to cover the area east of camp extending some two or three miles back from the lake. The terrain was not difficult, and with several small streams running through to the lake, it was hard to see how anyone could stay lost for long. I happened to be the member of our party who found the lad. It was an unforgettable experience. I had never before seen the effects caused by fright and the realization that one is lost. He stood near a tree gazing into space, seeming not to hear either my shouts or my whistle. It was not until I was within 50 yards that he came to me with open arms mumbling something about going home. He had thrown away almost all his equipment including a heavy outer jacket. His hat evidently had been lost as he made his mad dash into complete confusion. His hands and face were scratched and bruised. My suggestion to follow me back to camp was completely unnecessary as he in-

sisted on walking so close to my side that he bumped my leg with every step. I remember well his last words as he stepped into the boat to go back to his camp. "I'll never come back, never!" And he meant it too.

This experience started me thinking. I asked myself what I would have done under similar circumstances. It's so easy to sit by a warm, comfortable campfire and calmly outline your plans step by step as to just what you will do when that awful moment of realizing you are completely lost does come to you. It is surprising, however, how often we find ourselves almost totally unprepared. What are some of the things an outdoorsman could do to prepare himself for getting lost? I decided the first thing was to form a habit of taking certain precautions before starting out on every hunting or fishing trip. No doubt to the experienced woodsman most of the suggestions I am about to make will seem obvious, but in almost every case where men become lost, they have forgotten to take one or more of these simple "routine" precautions.

In planning the trip it's always good to check with the weathermen and then go prepared for almost anything. Maps, road conditions, and directions are important. Before leaving home tell some responsible person exactly where you are going. Don't be like the frantic mother who, when asked which mountain in the great range her son was climbing on a January day, replied that she did not have the faintest idea. It didn't give the would-be rescuers much to start on at a time of the year when every hour really counted. If you are unfamiliar with the territory, hire a guide. He'll save you many hours of precious hunting time and no doubt help fill your game bag too. If you change your plans, tell someone about it. If your car is to be parked on or near a road for any length of time, leave a note as to where you have gone, the number in your party, and when you intend to return. Usually you can contact the local Ranger or conservation officer who can give you some very helpful hints about the territory. Check your car for gas, oil, chains, an extra blanket or two, food, and other items which become so important when you need them. Last, but especially important, use an equipment check list and be sure you take along what you need. At times a compass or a first aid kit can be much more important than your rod or gun.

In addition to these physical precautions there seems to be a great need for a little mental preparation as well. A wise woodsman once said that all the equipment in the world is no substitute for an empty head. When that first realization suddenly flows over you and you are aware for the first time that you are hopelessly lost, well, anything can happen—and sometimes it does. It is very easy to obey that first impulse to unload yourself of all non-essentials and run as hard and as fast as you can to get out of the place in the shortest possible time. On the other hand you can sit down, relax, and think things through. Sometimes this one decision has spelled the difference between a man's safety and his serious injury or even death. I hope we agree that some mental preparation is also necessary.

It's easy to say: "Keep your head, stop, sit down, relax, think things out, rest, stay put, conserve your energy, stay warm, use what equipment you have to best advantage." But saying these things and actually doing them are as different as two grouse dogs. So we come to the last two steps in preparing ourselves "for getting lost": Equipment and "know-how." They go hand in glove; one is worthless without the other. Let's look at equipment first.

If you are going hunting I am sure we can safely assume that you won't forget your gun and ammunition; or can we? Anyway, I am interested in the additional items of equipment every man who is planning to travel in the so-called back-country should take along. We could argue about a complete list for a week and never agree. Some fellows take hardly anything, while others tote just about everything, including "the kitchen sink."

You'll want a sheath or pocket knife, or both, plus a compass with which you are familiar. Don't be like the fellow who thought that his compass always pointed in the direction of camp or the guy who forgot which end of the needle pointed North and traveled half a day in the opposite direction. I usually carry a candy bar or roll of hard candy, a large bandana or handkerchief, a piece of cord or rawhide lacing, and a supply of toilet paper in a small plastic bag. How important that last item can be! The plastic bag keeps it good and dry too. Matches in a waterproof container, maybe a small flashlight, money, a pencil and paper, all will come in handy. A whistle, some antiseptic and bandaids, and even a small hand axe are all good. Next time you are out hunting or fishing check your companion, if you know him well enough, and see just what he is carrying in all those pockets.

So much for equipment. Complete as it may be, it's all useless without "know-how." A knowledge of the woods comes from only two sources: That which you learn from association with seasoned woodsmen, and what you extract in that rough, tough old school of experience. Often times the words of wisdom fall on deaf ears, but the bruises of experience are longer remembered. Having gathered as much "know-how" from others as we could, six of us decided that the only way to see if we could really take care of ourselves in the woods in an emergency was to try it. In order to actually experience "getting lost" and to test our "know-how" and equipment, we decided to spend twenty-four hours out in the back woods with only the clothes and equipment we might have with us on an ordinary December rabbit hunt. Before I go any further, I might say that a July trout fishing trip might well have been a better choice. With two feet of snow on the ground and a temperature of about 20 degrees above zero, we started out. We each carried no special equipment except the items listed above plus a small survival kit which I had packed up for the occasion. Knowing that the temperature would go down rather than up before morning, our first concern was for a warm place to sleep. After looking longer than we should have, we finally selected an upturned tree stump and went to work. Using poles, branches, and boughs broken off by hand we laid up and thatched a sort of one-sided teepee with a small opening on the side for a door and a smoke hole in the top. Next came boughs for ground cover and wood for a fire. We soon found that trying to break up firewood by hand in sufficient size and supply was too long and too difficult a task for our few remaining minutes of daylight. Our shelter had taken longer than we had planned.

Someone hit on the idea of carefully breaking off two or three small standing dead maples by pushing them from side to side. After much pulling and hauling we succeeded in pushing them into the opening of our shelter. A fire was built between the ends of the logs and as they burned, we gradually inched them into the fire. This trick saved us from a cold night as our small firewood would never have lasted. It was during all this work that we realized the importance of having a chunk of candy to munch. It gave us the needed extra energy plus a sort of safe feeling which seems to usually accompany the process of satisfying one's hunger. We also found that outer garments must be taken off to keep perspiration and dampness in our clothing to a minimum. We tried to conserve as much energy as possible and still get the work done before dark.

The fire kept us warm on the top while the boughs padded with our outer jackets helped protect us below. We found how important it was to remove all snow from

above and around the fire, else we received periodic showers and drippings. I can say that we were reasonably comfortable, but I must also admit that we found need for several items we had forgotten. We learned a great deal and the experience gave us confidence in our ability to survive under similar conditions in an emergency situation. As we sat around the fire that night, I jotted down a list of things in the order of their importance that we felt we should do if we were really lost. This is it:

"WHAT TO DO WHEN LOST"

Keep your head; stop; sit down; and think. Then:

1. *Look For And Make a Shelter*—don't wait too late, darkness may overtake you. Fallen trees, caves, boughs, snowdrifts will provide shelter. Get out of the wind, keep warm by the fire or a minimum of motion. Protect yourself from the ground cold by layers of leaves or boughs.

2. *Make Signals For Rescuers*—build signal fire, make tracks in the snow, blaze trees, fire three shots, three blasts on a whistle, mark your location by blazing trails out in all directions. If you must move, leave a message as to the direction you have taken, mark your trail by blazing trees, cloth markers, or breaking twigs.

3. *Get Water* — it's more important than food. Use streams, lakes, heavy dew, catch rain, melt snow, use Halazone tablets to purify it at one per quart.

4. *Search For Food*—animals, birds, fish, barks, fruits, and some plants. If you are not sure—eat it only as a last resort. Set snares and traps.

Be sure to mark your trail so you can return to your emergency shelter • rest • sleep • stay put • think • conserve your energy. Don't give up! Help will come •

Next we discussed the subject of equipment and took an inventory of just what we had with us and what should be taken in the future. From this discussion and a study of the many equipment and survival kits which have been made in the past for airmen, explorers, and persons who ventured into the wilderness, I improved my survival kit, eliminating unnecessary items, adding others. I now carry it in addition to all those items I usually take, or forget to take, as the case may be. It is to be used for emergency only, when and if that time does come. It contains a total of 51 items, 24 of them different, weighs only 7½ ounces and fits in your pocket very easily. It is easy to make for yourself, or may now be purchased commercially. (See pictures.) After perfecting the kit we took several more survival trips and found them to be highly successful.

If you really want to prepare yourself for such an experience try a "survival trip" of your own. Get a buddy or two, preferably men who have some woodcraft skill, let someone know exactly where and when you are going and when you will be back. Follow the four basic principles outlined. Make it realistic, but not too tough the first try. Summer time is best for a starter. Assuming that you carry a survival kit similar to mine or at least have a majority of the same items of equipment, here are a few hints for either your test survival trip or the real emergency just in case it happens to you:

Use some of your emergency food during the first few hours you are "lost" and before you have time or opportunity to set your emergency snares or use your fishing equipment. *Eat or dissolve it slowly.* This will also serve to steady your easily shaken nerves and give you added confidence in yourself during that first period of realization and shock that you are lost and probably "won't be home until morning—or later."

When building a fire, strike your matches on as dry a surface as you can find. Hold the match head down rather than up. Gather tinder and firewood and place in a dry place. In winter particularly gather twice as much as you think you will need in order to have enough. Use small branches or squaw wood for tinder, larger standing dead trees for firewood. Avoid all unnecessary exertion. *Save your energy.*

Keep your compass clear of metal objects. Use trees, rocks, or prominent objects at a distance to keep on a straight course. In thick areas, check your compass more frequently. Follow streams down current, they will lead you to larger streams, lakes, or civilization. Blaze your trail by breaking twigs, marking trees, or tying bits of cloth on branches or shrubs. *Don't move your camp unless you have to.* Your chances of being found are much better if you will "stay put." If you must move your camp, leave a message as to the direction you have taken, time and day left, your general condition, etc.

When assembling fishing equipment be careful to tie it securely. Cut a live sapling for a fish pole. Look under rocks and rotten logs for bait. Practice making snares and traps.

Fasten your whistle around your neck or to your belt with cord so you won't lose it. Then it will always be ready to answer your rescuers' call, 3 sharp blasts for help!

Take care of small cuts, abrasions and particularly blisters and avoid infections by using an antiseptic, bandaids and tape. Severe cuts may be drawn together by sterilizing a short strip of adhesive in the center and drawing the wound together with the tape. Sterilize your handkerchief with the fire and cover the wound. Your belt or handkerchief will serve as a tourniquet to stop severe flow of blood but be sure to release it often. Avoid extreme exposure to sun, and sunburn; keep covered. In a cold climate, keep as dry as possible—*dry out clothing immediately* to avoid freezing.

Make a cup from your aluminum foil for drinking or boiling water. Use double thickness. Make yourself some hot bouillon. Use Halazone tablets or boil your water to *purify* it if you question its source.

Make snares with wire and cord and a bent sapling. Use a figure "4" deadfall to catch small game. Look for the many foods available in your area such as fruits, nuts, birds, barks, plants, animals, fish, buds, eggs, snakes, grubs, worms, and bugs. When you become real hungry, all of these begin to look good.

Don't be afraid to sleep if the weather is cold. Except in very extreme temperatures of 30 to 50 below zero you will be awakened by the cold long before you freeze. Loosen your clothing for better circulation in cold weather. *Walk slowly*, keep dry both inside and out. Brush off snow before it melts, dry out wet clothing.

If you have no shelter or if a storm comes up quickly dig a hole in the snow or build a large fire on logs and melt a hole in the snow for protection. Use overturned stumps or large rocks to reflect the heat from the fire. Large dead tree tops or brush piles afford plenty of heat, firewood, and protection. *Don't drink alcohol;* it increases the risk of frost bite and numbs your senses. You will not be as alert to dangers. Eat snow only sparingly. Melt snow outside the body by fire or sun, conserving body heat.

On your return, spend some time talking over what you did and what you could have done better. If a real emergency arises after you have actually had such a practice survival experience, you will be much better prepared both physically and mentally to meet the situation and come out of it alive and healthy.

Don't make the headlines, at least not these kind of headlines. On that next trip to the woods prepare yourself to "get lost" before you go. Make a habit of these few simple precautions by carrying with you certain essential equipment and by preparing yourself both physically and mentally in the "know-how" of wilderness survival. As they say on the highway "the life you save *will* be your own."

Program for

Small Watersheds

by Irving B. Stafford,

State Conservationist,

USDA—Soil Conservation Service

Stream bed and stream bank erosion control structures on Dean Creek, Tioga County. Constructed under the Watershed Protection Project, cost was shared by the town and the county, with the farmer on whose land the structures were built providing labor and materials. Railroad ties used in timber cribbing were furnished free by the Lehigh Railroad. Structures were designed and work supervised by S.C.S.

THIS year of 1954, New York State becomes the scene of a critical experiment in the national conservation program. Four streams have been selected to show what intensified land treatment and modest structures can do to remedy a host of resource ailments including floods, droughts and other water troubles. The scope of the work will contrast sharply with vast developments on the great rivers of the country. Nevertheless, the significance of this experimental program on little watersheds will extend far beyond the ridges that encompass them. Its success or failure may well affect the entire conservation world.

Rensselaer County's Little Hoosick watershed, largest of the experimental areas, covers less than a hundred square miles. Another, Great Brook in Chenango County, drains only 26 square miles; Dean Creek in Tioga County, 9.8; and Ball Creek in Chautauqua County, 9.2 square miles.

Two key issues are at stake in this experiment. One involves an evaluation of techniques in land-use adjustment, land treatment and management that have been refined steadily by conservation farmers and agencies. The other issue—possibly the more important—will test whether local people dwelling within affected areas will take the initiative in getting the job done. Real drama attends the fact that for the first time, literally everybody—factory worker, farmer, suburbanite and school child—will have the opportunity to lend a hand in saving the local resources on which they depend for existence and enjoyment.

How did this experiment originate?

Recognizing that farmers hold the bulk of watershed lands, the Congress last fall wrote a history-making, protective program into the 1954 Agricultural Appropriations Act. Since then the Department of Agriculture, acting through its Soil Conservation Service, has approved "pilot plant" projects on more than 60 watersheds. About $5 million in Federal funds will be available for the purpose during the coming fiscal year, with an estimated total of $29 million required for a five-year schedule. Local organizations are expected to match dollar for dollar.

In passing the legislation, the Congress noted that "Experience in dealing with conservation projects authorized in flood-prevention and flood-control laws demonstrates that these laws are too cumbersome to apply to smaller watersheds."

The new act is therefore a mobile, uncomplicated piece of machinery, easily adapted to local situations. In fact, small watershed protection heralds a new kind of simplicity in Federal-local co-operation. For one thing, it adds very little to existing overheads, as it calls for no additional bureaus or authorities. For another, it is a true, 50-50 partnership, remarkably free of red tape. Documentation is essentially a gentlemen's agreement on the nature, extent, location, costs and anticipated benefits of the measures to be taken—plus a declaration of intent to share the burden.

Approval of watershed protection projects depends largely on a display of local interest. Sponsorship in New York State has thus far been assumed by the four county Soil Conservation Districts involved. County Agriculture Extension Agents have devoted much time and effort in providing the educational work so essential to success, while local Agricultural Stabilization and Conservation Service representatives have made additional funds available to farmers to push the work more rapidly. Other participation at the local level calls for representation of sportsmen's clubs, chambers of commerce, town governments, highway departments, railroads, and watershed associations, as well as the State Conservation Department.

Watershed-wide treatment plans dovetail into Soil Conservation District programs, in which New York farmers have been doing an increasingly better job of "trapping the raindrop where it falls" for many years. Their contour strip cropping, sod waterways, farm ponds, diversion terraces, cover crops, land-use conversions and other familiar practices have already done much to increase the water intake of soils, slow up runoff and check erosion.

Then, too, current programming has been expedited by inventories of land, water and farm planning needs already prepared by the Soil Conservation Service as part of its regular assistance to districts. Now, SCS will be able to expand its technical help locally. Another Department of Agriculture agency, the Forest Service, will likewise broaden its functions on watershed woodlands. And studies of streamflow and climate supervised by the U. S. Geological Survey and the Weather Bureau will also be part of the Federal side of the bargain.

Bookkeeping to insure that everyone "pulls his oar" will be largely a matter of crediting all watershed workers with the fair value of labor, counsel and materials actually applied to the task. The Federal effort will be predominantly technical and advisory. The local responsibility will be an informed and organized type of follow-through, with special emphasis on the securing of easements, rights-of-way and a high degree of co-operation from individual landowners.

What about the actual work?

Modest engineering structures, such as small floodwater impounding basins, debris dams and channel works will supplement basic land treatment in some areas. Since the philosophy of the current legislation is to show what a properly inspired, grassroots democracy can do on a slim budget, all measures will be sharply limited. For example, it is specified that no designated watershed may exceed 250,000 acres; and no impoundment capacity may be greater than 5,000 acre-feet of water. Although project surveys and work plans will not be officially completed until July 1st of this year, citizens of the four New York watersheds concerned have already swung into action:

Over on Ball Creek, the Jamestown Chamber of Commerce has produced and distributed a remarkable booklet stressing the local conservation problems as a public responsibility. Neighborhood radio stations and newspapers have picked up and supported the theme. The Chautauqua Lake Improvement Association has extended the hand of fellowship to the 40 farmers on the Ball Creek watershed, indicating their mutual interest in local resource-saving.

Crux of the challenge is to protect short, steep slopes around the lake from erosion and flood crests, while at the same time halting deposition of mud that threatens the recreational use of popular Chautauqua. A survey made last year revealed deltas of silt up to four feet deep formed (and still forming) at the mouths of tributaries. The silt was originally productive topsoil from nearby farms; now, it represents a growing hazard to the lake's fisheries as well as a nuisance to boatsmen.

Tangible progress has already been made on Tioga County's Dean Creek watershed, where local interests teamed up this past summer in constructing two flood-control projects. Dams of timber-crib design now stand as testimony to excellent co-operation between the Town of Spencer, the Leigh Valley Railroad, the County Highway Department and the Tioga County Soil Conservation District. The structures will reduce stream velocity in floodtime, and also trap debris that might otherwise clog channels and add to flood damages. And as an example of small watershed economy, the highway department plans to retrieve useful stone and gravel from the debris basins in the conduct of routine maintenance operations.

It is likely that other minor engineering (such as channel reshaping) will be established along Dean and its tributary, Burheight, as they make their way toward the Susquehanna. Meanwhile, the 42 watershed farmers have stepped up their soil and water control practices, with generous backing from local sportsmen, townsfolk, the Conservation Department and other groups concerned with the broader aspects of the program.

In Rensselaer County, landowners along the Little Hoosick set out to tame their fast-flowing "problem child" sometime ago; designation as an approved watershed project has added zest to their labors. The objective is to prevent the stream from periodically tearing the valley properties to shreds as it has done at least five times on record. On the last occasion, it ripped through Berlin on New Year's Eve, 1949, and the town is still feeling the pinch from resultant damages.

The protection project area will extend from a point above the town to the junction with the Hoosick itself. Unstinting effort on the part of Rensselaer's Soil Conservation District directors has been rewarded by majority co-operation from the 140 watershed farmers. Inspired by prospects of better fishing and hunting, Little Hoosick sportsmen have already lent willing hands, particularly in the public information phase of the campaign.

Nowhere in New York has watershed activity been more intense than on Great Brook, a tributary of the Unadilla in Chenango County. District leaders and a supporting group known as the Great Brook Watershed Conservation Co-operators have succeeded in tuning public interest to a high pitch with an information program that has attracted attention over much of the Northeast. The result has been a notable refinement of organization that features sub-watershed group leaders, a finance committee and appointees who work closely with all representations of the watershed citizenry.

To spark the program, last summer the Unadilla Valley Grange sponsored a conservation field day at the Mortimer Brooks farm in South New Berlin. It highlighted typical watershed land treatment and use practices, to which nearly all of the 105 valley farms have subscribed as the vital program gets underway. Other anticipated flood protection projects include several water impounding reservoirs and debris dams with supplementary units of stream channel and bank improvement.

IN capturing a lion's share of present small watershed protection projects, New Yorkers have demonstrated both an unexcelled conservation conscience and consciousness. But they have also invited upon themselves a great responsibility. How they fare may well shape the future management of America's soil, water, range, forest and wildlife resources.

THE BACK OF THE BOOK

Scattershots
And Department Activities

Harold Canepi

As we went to press, we received the shocking news of the death, on the evening of January 4, of Assistant Superintendent of Law Enforcement Harold Canepi. Death came very suddenly; only a few hours before, we had been working with Harold in a last minute attempt to complete a tabulation of hunting accidents for publication in this issue.

The Conservation Department and all the sportsmen of the State have lost one of our most popular and most efficient law enforcement officers. But Mr. Canepi was a good deal more than a Game Protector, and perhaps the job on which he was working when he died will be his most enduring monument. This job, the supervision of the entire Hunter Training program, was only one of many that he tackled with great vigor, patience, understanding and good humor, and the hard work he did on this job—even though it may have hastened his own death—has helped to save the lives of others.

The Three Rivers field trials

"The American Field," published weekly in Chicago, Ill., enjoys an international reputation as sort of a bird dog social register. Dog owners, trainers, handlers (and some say the dogs themselves), hold the publication in reverence and listen intently to what it has to say. So do we, and we liked what it said in its issues of October 17 and October 24.

In these numbers, the editors reported upon this year's Pheasant Dog Futurity and the National Pheasant Championship —two of the country's top-flight bird dog field trials. For the fourth consecutive year these trials were run over courses laid out on the Conservation Department's Three Rivers Game Management area near Baldwinsville, Onondaga County.

The Futurity was won by "Builder," a white, orange and ticked pointer dog owned by Dr. Harold S. Longsdorf of Mount Holly, N. J., while the National Pheasant Championship was taken by "Rumson Farm Hayride," a white and liver pointer dog owned by Raymond Hoagland, Cartersville, Ga. "The American Field" reported these events, and then went on to comment upon the field trial areas, as follows:

"Perry B. Duryea, Conservation Commissioner for the State of New York; Robert A. Wells, Secretary of the Conservation Department; Earl A. Westervelt, co-ordinator of field trial activities; John L. Nemes, district game manager, and Perle Trumble, Nemes' assistant on the Three Rivers Area, have done a wonderful amount of good in the upbuilding of these grounds, not only for field trial purposes but to serve other useful conservation objectives and also provide acreage for public shooting. Frank C. Ash, the Fulton, N. Y., sportsman, a national figure who has the complete confidence of Empire State conservation authorities, has received fine co-operation from the Department and it is safe to say that projects planned for this season and next will be completed to assure these grounds affording even finer courses than were run over this October."

These, you'll agree, are heartening words and have particular bearing upon the Conservation Department's long-standing policy of encouraging field trial activity and the further development of good bird dogs. Good bird dogs are good conservation.

Pollution abatement, Marine District

Another step forward in New York State's fight against water pollution was seen in recent approval by the State's Water Pollution Control Board of plans to combat pollution in the Peconic River-Flanders Bay Area near Riverhead, Long Island. The plan directly affects domestic duck growers, who for years have penned large flocks of these birds on inlets and other open natural waters tributary to Peconic Bay, resulting in pollution of such waters and substantial injury to the shellfish industry.

The Water Pollution Control Board's action requires all duck growers in that area to submit plans for removal of their duck flocks from these natural open waters, and for installation and operation of devices to remove all settleable solids from waters used by ducks before they are allowed to flow into natural waters.

The plan developed by the Water Pollution Control Board in the Riverhead area is similar to one in successful operation by the duck growers in the Moriches Bay area in southern Suffolk County, Long Island. Measures taken there involve use of artificial lagoons and settling tanks, permitting removal of ducks from the natural waters.

Big oaks

The photographs of big trees—particularly big oaks—that we have run in recent issues seem to have caught the attention of an out-of-stater, Mr. D. J. St. Germain. Mr. St. Germain has come up with an entry from the State of Connecticut, although his tree is perilously close to the Massachusetts line. To be specific, the oak is on Mr. St. Germain's farm in the Town of West Stafford, has a circumference of 20 feet one inch, and a diameter of about seven feet measured three feet above the ground.

Mr. St. Germain further reports that a local forester has estimated that the tree would undoubtedly have been considered mature at least 200 years ago. And a surveyor advised him that this is probably the same tree referred to in a boundary description which was part of a transaction consummated in English pounds some years before 1776.

Rabbit bones—progress (?) report

The request for upper foreleg bones of cottontail rabbits which appeared in the Oct.-Nov., 1953 CONSERVATIONIST, has received very disappointing support from sportsmen. Although reprints and a letter elaborating on the use to be made of the data were sent to each sportsmen's club in the East Central Game Management District, in addition several county alliances were visited at their monthly meeting to further stress the importance of the study.

But as of the first week in December, seven weeks after the opening of the hunting season, bones from only 106 rabbits have been received. Only 71 of these were from the eight counties listed in the request, and only one county is represented by more than 20 specimens. *No* county has yet furnished enough data to be significant. To assure reliable data for the remainder of the season, at least one hundred bones will be needed from each county each month.

The objective is to study the patterns of reproductive success as they affect fall abundance. A rabbit's age can be told within certain limits by means of the bone structure of the humerus, and an *adequate* collection of these bones will disclose the overall age ratio of the rabbit population. By recording the monthly changes in age ratios throughout the winter period, it is possible to reconstruct the contribution of young rabbits from each month of the summer breeding season. Year to year correlations with summer roadside censuses will be made in an attempt to develop an improved technique for predicting abundance levels in advance of the gunning season.

The only practical means of getting the necessary large number of bones, representing a sizeable area, is through sportsmen's co-operation. Therefore, we again urge hunters to co-operate by turning in *one* of the humeri from rabbits they shoot in Albany, Columbia, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, or Washington counties. The place (nearest town) and date *when shot* are needed for each rabbit. Information and the bone to which it pertains must be kept together to avoid possible confusion.

Reprints of the original request, illustrating the location of the humerus bone, are available by writing to the Wildlife Research Lab., Delmar. Bones should be sent to the same address.

●

When the original notice of this research study appeared in the October-November issue of the magazine, we said that we would be interested in the response of the sportsmen in the eight-county study area. We observed that successful wildlife research and management is not a solo affair. Rather, it requires the understanding and co-operative assistance of the hunters who—in the final analysis—are the ones to gain most.

Well, we're still interested—and we're disappointed too, at the meagre response to date. We can only hope that late season rabbit hunters will be more co-operative than the "early birds."—Editor.

Cover your tracks, men

Although addressed to us, the following letter was not seen by anyone in this Department until one of our sharp-eyed Aquatic Biologists, J. D. Gould, spotted it in *Woman's Day*, the house organ of the Great Atlantic and Pacific Tea Company. We understand that the author of this letter, Mr. Cluett, is the radio-TV editor of this organ.

The inspiration for this letter was an item which appeared in *The New York Times*, as follows:

A license plate which fits under the instep of a boot so that a hunter may be identified by the imprint he leaves in the woods has received U. S. Patent No. 2616189.—New York Times.

Fish & Game Department
State Capitol
Albany, N. Y.

DEAR SIRS:

What do you take me for—a 1946 station wagon, that I should be required by law to wear a license plate under my clodhoppers and leave "NY653-229" stamped from one end of the Adirondacks to the other? Deer aren't so dumb, you know, that they don't get to recognize license numbers, same as motorcycle cops, and learn to high-tail it from sure-shot NY557-420 and laugh up their sleeves at pigeon-toed NY993-862 (Hair: brown. Eyes: blue. Weight: 168), who, they know from experience, can't hit the broadside of a barn.

Human scent makes things tough enough and forces us to stalk our game upwind; but this ridiculous law, which makes us tramp through the woods like a postage meter, leaving behind a clear record of everything except our income tax returns, is a downright invasion of our privacy. For example, on my last hunting trip I would have bagged a nice buck; but before I could so much as draw a bead, a state trooper bagged *me*. He said my wife had reported NY653-229, leather seat cover and red upholstery, missing since Friday.

If this pace keeps up, next thing we know you fellows will require all hunting dogs to carry a taillight and press their four paws on an ink pad before venturing into the underbrush to flush a covey of quail.

I had planned a weekend of shooting in the Catskill Mountains, but decided to stay home and paint the storm windows when I read your latest traffic regulation forbidding U turns up Cassie's Draw. And while I'm at it, what's the big idea of that one-way gully at the base of McGurdy Mountain? Where do you think I'm hunting—on the Hutchinson River Parkway?

Not too long ago, I was given a severe tongue-lashing for shooting pheasant in the Clove Valley region. The arresting warden claimed the ground was so dry he couldn't read my license number, and I'd either have to stamp harder or restrict my hunting to soggier terrain—a deliberate insinuation that I wasn't heavy enough to make a decent impression. He even went so far as to suggest that I carry my dog on my shoulders and put a cobblestone in each pocket of my hunting jacket for added weight. But I told him to go fry his ears in deep fat; what did he think I was hunting—sunken treasure?

How are you fellows planning to regulate the flow of traffic in the trout streams next spring, when there's bumper-to-bumper fishing? A toll booth in West Canada Creek? Parking meters on the banks of the Neversink? Gross weight and tonnage stamped on the side of each creel? Okay, mister, but if you do, you'd better prepare for the inevitable day when some infuriated sportsman, sick and tired of being treated like an out-of-state trailer truck, boots you in the seat of your pants with such impact that you'll carry the imprint of his license plate around with you for the rest of your life.

Let me tell you right here and now that this November, state regulations notwithstanding, I plan to go duck shooting in the marshes of Great South Bay in my stocking feet.

Yours truly,

JACK CLUETT

Jacking means jail

David J. (age 18), Marcus E. (age 20) and Phillip (age 21) Conklin, all of Huguenot, Orange County, are in jail—and they will be there for the next six months. It's the hope of State Game Protector W. H. Wilby and State Troopers Goodspeed and Ehre who apprenhended the Conklins and who were threatened with death by them that six months in jail will be sufficient time to convince the Conklins that the provisions of Section 185 of the Conservation Law (prohibiting the taking of wild deer out of season, at night and with the aid of an artificial light) mean what they say.

These are the violations the Conklin brothers are charged with. According to the Conservation Department's records, apprehension took place at 2:30 a.m. on September 27, 1953 in the Town of Deer Park, Orange County. They were indicted and tried at Goshen, before County Judge Raphael Egan who, on December 29, 1953, sentenced them to six months.

The action of the Legislature, within recent years, in amending the Conservation Law to provide that deer violations of this nature are indictable misdemeanors made it possible for Judge Egan to impose jail sentences as punishment for first offense.

Praise is due the enforcement officers for their vigilance and Judge Egan for his handling of the case.

The Conservation Department which shares Judge Egan's serious view of this type of violation is instituting action to revoke the hunting and big game licenses of these three men for a period of five years.

Back Issues

We had promised to list in this issue the names and addresses of those persons who advised us that they have back copies of THE CONSERVATIONIST for sale. Inasmuch as we are still receiving information on this we are unable to print the list. However, in the next issue we hope to have heard from all concerned and to have this list complete for publication.

Sportsmen of tomorrow

As most of our subscribers know, this Department now operates four conservation education camps for boys. They are located at DeBruce in the Catskills, at Rushford in Allegany County, and at Ray Brook and Raquette Lake in the Adirondacks. Recruiting boys for these camps is mainly the job of our District Game Managers, who contact the local sportsmen's clubs which choose (and foot the bill for) most of the boys.

According to Johnny Nemes, District Game Manager with headquarters in Syracuse, the co-operation of the sportsmen's clubs in his area during the past year was extremely fine. These clubs sponsored a total of 190 boys who put in two weeks each at the Tioga Point camp on Raquette Lake. In particular, Nemes was impressed with the work of the Elmwood Fish and Game Club of Syracuse, which sent 42 boys to the camp and underwrote the project with a check for $1,050.

All of which goes to prove that one good sportsmen's club can do a lot toward educating the sportsmen of tomorrow.

A new look for S.C.S.

DURING the past two decades, great strides have been made in the practice of soil and water conservation on the private lands of the State. The evidence of this progress is clearly written on the face of our lands, and one has only to fly over a portion of this State to see it: contour planting, strip cropping, diversion ditches, and reforestation; farm ponds and multiple purpose wildlife marshes. Closer observation on the ground shows that the best principles of soil and water conservation—as well as related wildlife conservation—have already been put to work on thousands of farms and in hundreds of woodlots.

Much of this progress can be traced to the work of the Soil Conservation Districts which are now organized in 40 of our counties under State law. Furthermore, many of the technical services which made this progress possible came from the S.C.S.: The farm planners and the soil technicians of the Service, working with the biologists and the foresters of the State Conservation Department, have introduced conservation over much of the State.

It is small wonder, then, that a great many farmers and conservationists in this and other states were keenly interested in the plans of Secretary of Agriculture Ezra Taft Benson for the reorganization of the Soil Conservation Service. Much confusion and misunderstanding attended the announcement of these plans, but now that the smoke has cleared it is possible to report on what these changes have been and what their effect on the service to our farmers and landowners will be.

In making this report, we quote from a statement written by Irving B. Stafford, State Conservationist for New York, with which we understand Dean Myers of the State College of Agriculture and other authorities agree. Along with this analysis by Mr. Stafford was an equally heartening joint statement issued by the Soil Conservation Service and the Federal Extension Service, in which the two services unequivocally pledged continuing co-operation so that the educational work of the Extension Service on the one hand, and the technical assistance of the Soil Conservation Service on the other, can continue to go along hand in hand.

The following excerpts are taken directly from Mr. Stafford's statement:

"Reorganization of the Soil Conservation Service by Secretary of Agriculture Ezra Taft Benson, about which there has been so much controversy, should materially benefit New York State agriculture.

"The changes made by Secretary Benson bring the administration of the government's part in the soil and water conservation program closer to the farm. The Northeast regional office of the S.C.S. at Upper Darby, Pa., and six regional offices in other parts of the country were abolished because the Secretary believes that the most effective line of operation is from the Federal government directly to the states, counties, and local communities.

"Three significant results may be expected in New York State from this reorganization.

"1. The State Conservationist, who is familiar with the problems of his area, now has more responsibility so quicker decisions can be made on the S.C.S. program to meet local needs, including the use of manpower and facilities.

"2. There will be a larger staff of technicians in the State office, all skilled in the science and application of soil and water conservation. The additional technicians will be transferred from the regional office which has been closed.

"3. Better teamwork with other agricultural agencies in the State.

"This closer co-operation between agencies at the State level should result in the development of Soil Conservation Districts in agricultural counties where they have not been established. There are now 40 such Districts organized in the counties of the State, each run by five district directors. Three out of five of these directors must be farmers.

"Most of the positions in the reorganized S.C.S. are being filled with employees who have long served in that organization. This fact in itself is a great source of satisfaction, both within the Service and to those with whom the Service works, because it indicates that there will be a continuity of policies and objectives. This pattern of filling important positions with experienced career employees is being consistently followed.

"Plans now being put into effect make it clear that the U. S. Department of Agriculture recognizes the necessity of a strong national program of soil and water conservation. The Soil Conservation Service will continue to be the technical soil and water conservation arm of the U.S.D.A. It will co-ordinate its technical program with the work of the Cornell Agricultural Experiment Stations at Ithaca and Geneva and the U.S.D.A. Agricultural Research Service. Better procedures are being developed for a two-way flow of research information from the scientists in the Experiment Stations to the field men who must make the application on the land, and for suggestions to flow back to the scientists from the farmers who recognize problems requiring specific research.

"The educational phase of the soil and water conservation program is the primary responsibility of the New York State Extension Service. S.C.S. can discharge its responsibilities for technical assistance most effectively when it is complemented by effective educational programs through farm demonstrations and other means which help farmers to understand the benefits to be gained from conservation farming and the principles underlying the conservation practices.

"Financial aid to farmers to pay for conservation improvements is handled through the various credit agencies and U.S.D.A.'s Agricultural Conservation and Commodity Stabilization Services. Plans are well along for the co-operation of these agencies in Washington and details of co-operation within this State are being developed rapidly."

Notes on the 1953 deer season

At year's end the Conservation Department's Bureau of Game was still busy tabulating the records of the generally successful 1953 deer season in New York. The Bureau reported that more than 22,000 deer kill tags had been checked thus far—enough to provide basis for a fairly reliable comparison of the buck deer kill by regions of the State, and with seasons of recent years. Comparing returns received to date with reports for the same period in past seasons indicates that the 1953 reported legal kill of bucks in the Adirondacks will exceed that of 1951 or 1952, while in the Catskills and Eastern counties, the reported legal take is running ahead of figures for 1951 and is about equal to the buck take for the 1952 season. Only in the Central and Western counties of the State is the reported kill to date below that for the 1951 or 1952 seasons. The lighter kill in this region was due in part to decreased hunting pressure during the 1953 six-day season for buck deer only.

There will be some delay before final zone and county deer kill tabulations can be adjusted on the basis of a check on the percentage of successful hunters sending in their returns. In the meantime, nearly complete records from the operation of the 14 deer checking stations during the past season showed a 32 per cent increase this year over last year in the number of bucks checked at the Adirondack stations, and a 27 per cent increase at the Catskill stations. The checking station trend was down 10 per cent in the Central and Western counties, reflecting the decline in reported kill for that section as compared to the buck kill for 1952—when far more hunters were afield because of the three-day "hunter's choice" season.

A total of 2,855 bucks were examined this season at the checking stations;

1,090 from the Adirondacks, 1,140 from the Catskills, and 625 from Central and Western counties. As one instance of the valuable information to be secured by such investigations, it was learned that in the Adirondacks this year approximately 75 per cent of the kill was made up of bucks 2½ years or more old. These bucks, in other words were at least 1½ years old during the 1952 season and many could legally have been harvested that year. This is an unnecessarily high percentage of carry-over, and indicates that the legal buck take of the 1952 season could have been doubled without danger of overharvesting. In the Catskills, the deer checking station studies showed that 40 per cent of this year's buck harvest was made up of deer 2½ years or more old, with the remaining 60 per cent of the kill being 1½ year old bucks. This is a ratio considered to be satisfactory in that it allows an adequate survival of bucks for breeding purposes, and at the same time provides an opportunity for trophy heads.

In the Central and Western counties, checking station data showed that the carry-over of legal bucks from the 1952 season into the '53 season was about 25 per cent, with 75 per cent of the 1953 kill being 1½ year old animals. This, the game men feel, reflects a bit too heavy a cut into the buck population, but in view of the satisfactory number of doe deer in that first class deer range, a proportionately larger fawn crop is expected next spring. This should restore the herd to approximately its 1952 level.

The herd in this area is in top notch condition. Our objective is to keep it that way. The fact that the deer occupy intensively farmed country makes the economy of the area more acutely sensitive to deer depredations. So, although the western counties could support more deer, it would be at increased expense to the agriculturist, and would result in the gradual deterioration of the deer range itself. Annual and adequate cropping of the deer herds, therefore, must continue to be a major consideration in determining the type and duration of deer seasons.

Finally, we cannot overemphasize to hunters the urgency of the need for proper conduct in the practice of their sport; the farmer can and will tolerate a few reckless deer much more readily than a few reckless hunters.

Take it off?

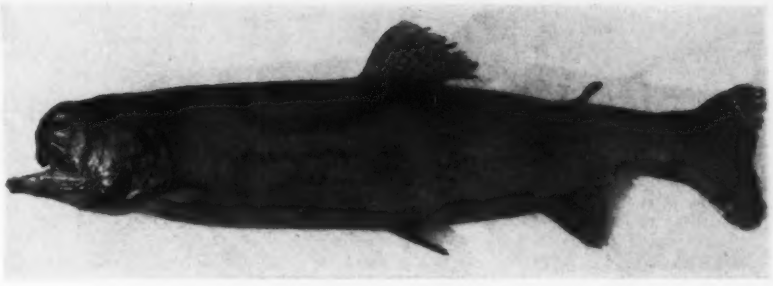
One of our favorite newspaper columnists is Hayden Pearson, who writes newsy notes (and very useful ones too) about the various problems and pleasures of living in the country. In a recent column we came across an item that was of particular interest to us, since in our October-November issue we had a fairly lengthy piece about an electric deer repellent known as the *Deer Fly*. In his column, Mr. Pearson commented that he had been given one of these machines by the company, so that he could try it out and report on it.

His report was extremely favorable: No deer had bothered his garden all spring or summer.

But then Mr. Pearson proceeded to pass on a couple of other suggestions that he had received from some of his correspondents. One was from a lady in Vermont who had discovered that all she had to do to keep deer out of her garden was to hang a sweaty shirt on a pole. Periodically, she said, she hangs out a "freshly sweated shirt"—and there hadn't been a hoof print in her garden all year.

Another lady advised Mr. Pearson that on the way home at night, all that was necessary was to take off your shoes in the garden (instead of in the house) and leave them there (in the garden) all night.

Mr. Pearson concluded his column by requesting other suggestions from his correspondents. We echo that request. But our shoes have taken quite a beating already and our shirts are somewhat frayed, and we're ready and willing to hear about a deer repellent that doesn't involve the sacrifice of our limited wardrobe.



Pug-nosed puss

This photograph of a sadly deformed rainbow trout was sent to us by Mr. Frank Gesselein, of Ausable Forks. He caught the trout in the West Branch of the Ausable this past April.

Along with the photograph, Mr. Gesselein wrote us as follows:

"As you will note, this is certainly a freak specimen, yet it was in perfect health regardless of the odd jaw and head formation. The lower as well as the upper jaw had teeth. The nose was perfectly rounded, showing no sign of bruises, scars or other damage to warrant such a puss. I had him mounted, and he may be seen in my restaurant here."

Mr. Gesselein then asked what might be the cause of this mess, and our Aquatic Biologists promptly thumbed through "A History of Fishes" by J. R. Norman, and pointed to the following paragraph therein:

"Bulldog-nosed" or "pug-headed" trout, pike, etc., in which the snout is abnormally shortened so that the lower jaw projects, are captured from time to time, and hump-backed or hog-backed specimens, malformed, also occur among marine and fresh-water fishes. Such individuals do not appear to be necessarily unduly handicapped in the struggle for existence, often attaining to a fair age, and generally appearing well nourished."

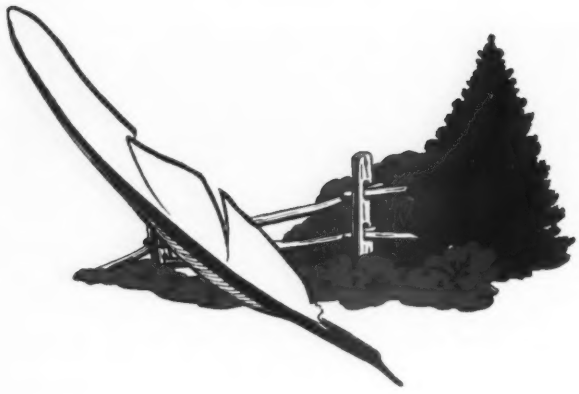
Our Aquatic Biologists also advised that trout with similar deformities are not unusual in our hatcheries. But then they hastily added that they are not *common* in our hatcheries either.

Chief Dennis

Jules Paul Dennis, chief of the Abenaki Indians, is dead at 87 in Old Forge. It was at his shop in 1949 that we traced down the origin of the Adirondack pack-basket and ascribed it to his tribe (see August-September '48 CONSERVATIONIST). Chief Dennis was ailing then, but not too indisposed to recall how his people designed and made the pack-basket to replace the old Canadian tumpline pack.

His story is confirmed by Abenaki history and his grandson who still lives at Old Forge, also corroborated the chief's recollections.

He had been absent from his usual haunts among the resorts of the central Adirondacks in the summers and from his traplines in the winters, remaining close to his little shop in Old Forge. The North Woods will miss this kindly, modest little man.—R. B. M.



LETTERS

To The Editor

Archery

Dear Editor: Archery is growing by leaps and bounds in New York State, but also there seems to be a growing friction between the high-powered boys and the archers. Especially is this true in Orange and Sullivan counties where during the last deer season ('53), several gun clubs publicly advertised their woods as being closed to bow and arrow hunting. This open hostility from the gun clubs plus newspaper articles of "deer being seen running around with arrows stuck in them," has also caused much comment and grumbling from the non-hunting public. Here, I would like to list just a few of these gripes:

(1) The archer spooks all the deer before the gun boys get a chance. (2) He has a month for deer hunting, we should have a month too. (3) From an honest rifleman: "You guys are shooting our camp meat." (4) An arrow will wound a deer but seldom kill it. (5) Deer running around with arrows sticking out of them.

This last seems to be the biggest complaint. I am not an expert rifleman or bowman, but I love the woods and my hunting and fishing as much as any man. Especially have I really enjoyed my deer hunting with the bow in the last two seasons. There was a greater sense of freedom and certainly no sense of fear. I went into the woods wearing dark-toned clothes so that I blended with the foliage better—no "fire reds" or yellows to warn the deer or the hunters that I was there. I stalked deer and moved about freely. I didn't hide behind a tree to blow my nose, but stood right out in the open and waved a white handkerchief—(no zing). I climbed that big leaning pine and wasn't mistaken for a bear. At dusk I walked quietly out of the woods without having to whistle all the way. All this without the feeling that at any moment some ignorant trigger happy so-and-so was getting set to blow my head off with a .30-06.

In answer to the No. 1 complaint, it is only common sense that the archer is not going to scare the deer into the next county any more than the small game hunter who is out at the same time. A bowman moves slowly and easily or sits for a long time on a run for his opportunity to get a shot at a deer. Much less noise by far than the small game hunter or the brush crashing rifleman.

(2) It costs the archer $5.25 for his special deer hunting permit. It is not an easy way to get a deer even with the two-week early start. The archer would stand very little chance competing with gunners during the regular season. Any man who wants a 30-day season can buy a bow and a special license and get it.

(3) Answers itself.

(4) The killing power of an arrow is caused by penetration and the hemorrhaging effect that a good sharp arrow head will cause. A 45-lb. bow (minimum weight in New York) will put an arrow up to the feathers in a deer at 35 yards unless stopped by a direct hit on a bone. The sharp arrow head severs many blood vessels and arteries and slices through muscle. A deer hit in a vital area with an arrow doesn't run any farther before he dies than one hit with a bullet.

(5) A few deer have been seen with an arrow sticking out of them. Rumor and stories have now increased these few so that the woods are full of deer running around with arrows sticking in them. It is granted that deer will be seen in this fashion, mostly caused I believe, by poor hits, and by dull hunting points. It is proof in itself that these deer seen with arrows in them were not seriously wounded or they would never have been seen walking around. The deer will soon get rid of the arrows and the wound will heal. An archer has to have a pretty clear and open shot at a deer before his arrow will even reach its mark. Not so the rifle hunter, who can take a "flying shot" at a deer (how often have I heard that expression used). He hopes that brown patch in the brush was a deer, and because the deer doesn't drop dead on the spot he thinks he missed. How many deer are shot at in this manner that wander around with bullets in them? There are no feathers on a bullet, so it's hard to say. A deer is found dead in the woods with an arrow in it. It's very easy to see that arrow, but no one seems to think about the greater percentage of dead deer with bullet holes in them.

Paul T. Purcell, New Paltz

Dear Editor: There's been some opposition to Big Game Archery among gunners and some rod and gun editors. They're circulating all kinds of reports on violations, wounded deer and messy kills. I've hunted deer with a bow for five years, and haven't seen anything of this nature. I hope the Department will require proof of such atrocity tales before they lend them credence.

I don't have to remind you of the violations by some gunners, nor of the hundreds of gun-shot deer that escape to die in the woods. Near Acra, within a radius of one mile, I counted three dead does on the last week end of the gun season. Six reports from gunners themselves—about bucks they hit and lost. Then there's the ten men, more or less, who die from gun shots each year. The critics of archery never mention these angles. This has the ear marks of a smear campaign, grown perhaps out of bitterness over the Special Season given to archers. But before these people condemn archery, let's see them police their own ranks.

Ernest Hahn, South Bethlehem

Deer damage

Dear Sir: Two weeks ago, while driving on route 9G near Germantown, my car struck and killed a deer which ran across the road in front of me. The damage to my car was considerable. We (my friend and I) reported the accident to the State Police who took care of the carcass.

While having my car repaired I was informed by several persons that there is a provision in the State law which may enable me to recover the amount of the damage to my car. Who must I write to, and how to go about making my claim?

Howard W. Koseler, Richmond Hill

• *Very sorry, but New York State does not make payment on such claims.—Editor*

Hunter training

Dear Editor: This letter is written to express my appreciation of the fact that the Department has at last taken steps to give recognition in a real material manner to the efforts of the instructors who have been carrying on the Junior Hunter program for the past several years. I was more than pleased to receive a visit from Assistant District Game Protector Bryan Burgin the other day and learn that he and Mr. Milroy were really doing something tangible in promoting the program.

After four years of instructing, that was the very first communication regarding the program I have ever had, not even a letter acknowledging my appointment as an instructor from the Department was ever received. Frankly I was getting a bit discouraged: parents of boys and girls calling up from distances over 20 miles, asking for a "test" for their offspring. It would seem that the least the Department could do is to inform the license-issuing agent what was required. Teen-agers came from all over expecting that in a few minutes I would examine their gun-toting characteristics and issue them a permit to obtain a hunting license. When I explained that this was impossible, that four hours of instruction were required, many felt resentment against me, the Department, and any one else connected with the program. I was constantly trying to make excuses for everyone and I really had some pretty lame ones when the Department was accused of not making what was required more plain.

Protector Burgin, I gathered, has heard this same thing many times; he knew my story almost before I started telling it. This assured me I was not alone in my troubles. Now my purpose in writing you is to urge you to give this effort every bit of publicity you can in THE CONSERVATIONIST, keep driving the idea across so that the schools of the State will feel obligated to incorporate this Junior Hunter program in their curricula, work on the Education Department so as to enlist some real support from them in initiating the course in the schools. I have been teaching in New York Public schools for over 25 years; we have not begun to get enough Conservation taught in the schools. We have a well established Driver Education program going in the public schools—not only for secondary school pupils but for adults as well. Hunter safety programs are equally important.

This fall I hoped to circumvent these telephone calls and house calls for license permits for hunting: I advertised that I would have a course of instruction on a certain night about a week before the hunting season opened. This advertisement appeared in four or five small town papers in the surrounding area. On the night in question an even 50 boys showed up. Thanks to the local physical education instructor and the agriculture teacher who responded to my S.O.S., we were able to cope with the situation. Mr. Roberts, the physical education director (who is also a Junior Hunter instructor) has organized the classes so as to be able to take care of the youngsters in this area. It would seem that this could be done in many areas, and it would seem too that this is part of Mr. Burgin's planning. I feel that with your circulation you could really help this cause and I appeal to you to do so.

M. L. Peterson, Waterville

• *We understand your problems, and appreciate your carrying on in spite of them. We're doing the best we can to work out the "bugs" in the program, and we won't let up on the publicity either.—Editor*

12 Days of Christmas

Dear Editor: This is not meant for a criticism of your fine magazine, which we all enjoy very much, but we noticed an error in history on the second cover of your December-January, 1953-54 issue.

The story "The twelve days of Christmas" is inaccurate to the extent that January 6th, or Epiphany, is not the date of Christ's baptism; He was baptised at the age of about 30 by St. John the Baptist. The Epiphany, which means "a manifestation, especially of a divinity" was only the date on which the Magi are supposed to have arrived at the stable to adore the new born Savior. Its importance is in the manifestation itself, and in the fact that it was the first time this Savior was introduced to the gentiles.

Outside of this I have no other comment to make on your magazine other than to hope that my subscription hasn't run out.

James J. Aiello, Jr., Bayside, L. I.

Onondaga

Dear Sir: Last year I was living in a foreign land at places called Kumwha, Chorwan, Inchan, Seoul, Koje, Chunchan, etc. I was serving with the 17th Inf. Regt. of the 7th Division. Of course I never knew the meaning of these names, but wondered about them. Now that I am back in the States, in my own State I am living at a place called Wanakena on the Oswegatchie River. These names also confuse me. Now, I was wondering if you boys have any data about their meaning.

Ed. Reid, Wanakena

• *You who live in Wanakena live in "a good or pleasant place" near a river (the Oswegatchie) of "black water." Both names are from the Onondaga Indians.—R.B.M.*

Signs of the times

Dear Editor: Signs along the road to Broome Center, Schoharie County, read:

Private, No Fishing or Hunting
Trespassing Prohibited
Posted, No Hunting
Absolutely No Trespassing
Keep Out, Private

and then you come to the farm of a Mr. Thamm. His sign reads, "Hi—if you can't stop, wave as you go by."

Sydney A. Daniels, Middleburg

Out of the past

Dear Editor: While hunting deer this last November in the Adirondacks, I ran into an old birch tree with three (3) sets of initials carved on it. I could make out the date under one set and it appears to be *1891*. This tree was located on the edge of a "flat" section of forest lying between the yellow marker trail and Grassy Brook in almost a straight cross country line between the yellow marker and the old spillway on the Grassy, which is only a short distance upstream from where it runs into the Cedar. At the time we had our camp set up at the lower end of Cedar Lake, across from the Ranger Cabin, and were hunting the area between the Cedar and the yellow marker (towards Perkins Clearing).

I thought this picture might be of interest to someone who might have carved their initials (or knew of someone who had done so) on this old birch 62 years ago. Incidentally, my initials now appear on this birch—*1953*.

George T. Butler

• *We forwarded this to Al. King, Department Surveyor, recently retired, who answered this way:*

Dear Pete: I have an idea the "JCS", 1891, might be Jas. C. Sturges, a former resident of Speculator, now deceased, who used to hunt and trap all through the Cedar Lakes section. Could be old Jim; I knew him well. But it's only a guess. As to the "AL", 1891, I have no idea. Might be some sport hunting with Jim.

Al. King, Speculator

We still have coyotes

Gentlemen: While hunting near Lens Lake, Warren Co. with Nelson Bennett (who lives there and is caretaker for the Livingston Lake Land Co.) he caught a coyote or brush wolf. Caught it in a trap he had set for a raccoon.

Am inclosing a picture I took of Mr. Bennett and the wolf. The following week he shot another which I think was the mate to the one caught in the trap. That was a female and the one shot was a male. He gave me the male after getting it tagged for bounty. It weighed 33¼ lbs.

Ira Gray, Corinth

Milmoe report

Dear Editor: The article in the December-January CONSERVATIONIST, excerpting my talk on the work of our Joint Legislative Committee on Natural Resources, given at the recent New York State Conservation Council's annual convention in Corning, has apparently been widely read. Since its appearance I have received a substantial number of letters, expressing interest in the activities of our Committee, particularly with reference to our studies on the State Forest Preserve, and requesting further information. All of these letters are being answered personally.

Of course in summarizing more than two years of Committee effort in an address of this sort, it is possible to accent only the broad highlights and paint the picture in rather sweeping strokes. Further summarization and digesting of the talk for publication, to fit your editorial requirements, naturally eliminated other items originally included. Therefore, the article which appeared in THE CONSERVATIONIST should be regarded merely as an interim report, and should not be interpreted as representing conclusions reached by the Advisory Committee.

At the Committee's most recent meeting with our Advisory group, held on December 11, 1953, it was unanimously agreed that we will not present any proposals for Constitutional Amendments to the Forest Preserve provision for consideration at the 1954 Legislative session. While we have already covered much ground in our search for all the essential data, there still remain several important areas to be explored.

The fact that final figures are not yet available in the long term study being conducted by the State Tax Equalization Board on forest land values and assessments is one of the cogent reasons impelling us to defer our final conclusions. Furthermore, a detailed but open-minded study of possible zoning patterns, advocated by many conservationists, is now contemplated by our Committee. Additional survey projects, including potential land acquisition policies, are also under consideration.

Before any Constitutional Amendment proposals will be presented to the Legislature for action by our Committee at any future session, it is also our firm intention to provide time for ample public hearings at which all interested persons in the State may have full opportunity to express their views.

I am confident that our Advisory Committee and our parent group will eventually come to substantial agreement on constructive recommendations that will result in a tremendous improvement in the administration, operation, and use of our valuable Forest Preserve for the benefit of all our people and of the generations yet to come. The final decisions are so vital to New York State's best interest and progress that we must have complete answers before we advocate action.

Meanwhile, there is a good likelihood that our Committee may present certain proposed changes in our statutory laws at the current session of the Legislature, designed to protect the State's title on lands in the Preserve. Each year various Preserve Lands are alienated from alleged State ownership through defective tax-sale titles. In most cases the State has paid taxes to local municipal governments on these properties for many years. The Committee is earnestly seeking to find appropriate and equitable legislative answers that might alleviate this situation.

We are recommending that the Legislature authorize continuation of our Committee's research studies for another year with the assurance that the time is fast approaching when we may be able to advance a definite and constructive program of action, which we trust may receive popular support, for the improvement of our State Forest Preserve.

Wheeler Milmoe, chairman,
Joint Legislative Committee
on Natural Resources

More on eagles

Dear Editor: Since writing the article on eagles in your Oct.-Nov. issue, I have received numerous letters containing much information and personal experiences with eagles, and a little of it I would like to pass on:

There has been a Bald Eagle nesting for eight of the last ten years in the region of Tuxedo Park, N. Y., and for two years this nest was on a cliff. Another cliff nest was described as used by Bald Eagles for many decades along the upper Hudson River near North Creek, and last occupied in 1926, after which part of the cliff above slid into the river.

On Oct. 25, just as the eagle article appeared, a sub-adult Golden Eagle was shot at Sylvan Beach, N. Y. by a hunter who claimed that he shot in self-defense. Suffice it to say that there is no authentic record of an eagle ever attacking a man, even at the nest. The eagles are so shy that, in the case of the Golden, the bird often slips off unobserved before one arrives at the nest, and does not reappear until long after the disturber is well away from the nest. Unfortunately, self-defense is advanced by the shooter to defend himself from the legal consequences of his act.

The plumages of the Golden Eagle are poorly understood by many competent naturalists, and the bird figured on the back cover of THE CONSERVATIONIST is actually a juvenile before his first molt, despite his apparent association with the nest. The fully adult bird shows about no white either on tail or at 'wrist.'

—Walter R. Spofford, Fayetteville

Season's greetings

Congratulations Gentlemen: From my own observation, and from the opinion of others I have talked with, I believe that it is now safe to say that you have, through admirable mismanagement, succeeded in destroying our once thriving deer herd. You're welcome.

Howard Bates, Troupsberg

Mechanized partridge

Dear Editor: I am sending you a picture of a hen partridge. This bird has been living in a piece of woods near here for the last four years, and the only time you see her is when you are working near the woods with a tractor. Then she will come out and fly around the tractor and sometimes will light on it—so near that you can catch her.

As a partridge is normally a very wild bird, was wondering if you could explain this.

E. H. Woodruff, Plainville

• *No, we can't. But we know of other balmy antics performed by individuals of this species.—Editor*

Out on a limb

Dear Editor: I have been told that you would be able to help me identify an animal that I saw this past summer while on a canoeing trip. The enclosed pictures were taken from a distance of around 200 feet, and I would estimate that the animal was about 30-40 feet in the tree from the ground. The location was outside of Speculator, New York on a stream called the Kunjamuk.

Dorothy B. Wells, Johnstown

• *A well fed porcupine.—Editor*

Dichromatism

Dear Editor: Enclosed please find my renewal to your magazine, and two partridge feathers.

The light colored one is from a partridge shot near Truxton, N. Y. and the darker one is from a bird shot at Frozen Ocean, near Owasco, N. Y. Would be very much interested in your explanation of the difference in color. What's the answer?

Edward F. Darrow, Auburn

• *The answer is dichromatism, a fancy word for difference in color phase. Dichromatism may occur within the same brood of grouse, with some gray, some brown. As a general rule, grouse in higher areas (Adirondacks and Catskills) tend to be grayish, while those of the lowlands are more likely to be brown. —Editor.*

Open season on doe

Dear Editor: The Junior Class of 1953 at South Kortright Central School is having a debate on the question: "Should there be an open doe season every year?"

I would like to have your point of view.

LeRoy Cornell, So. Kortright

• *We have never advocated a season strictly on doe deer, and we suggest a season on deer of either sex only when and where agricultural interests, condition of deer range and deer population, and other considerations in sound game management indicate that such a season would be advisable.—Editor*

St. Lawrence Seaway

Dear Editor: I have awaited each issue of THE CONSERVATIONIST since its first appearance and I have always held it and its stories in the highest esteem, but since the receipt of the latest issue, that esteem has dropped to nearly the vanishing point. I am deeply interested in Conservation in all ways that the word implies and I am also interested in controversial issues that affect the people of New York State. But Conservation and issues other than Conservation are distinct and must be kept separate.

What is the implication of the article on the proposed St. Lawrence seaway? Have the Power Interests in the State, now that they can't grab Forest Preserve lands, turned to the Conservation Department and its publications to further their own selfish interests? I would also like to know who authorized the inclusion of such an article in THE CONSERVATIONIST when the entire subject has no bearing on Conservation except to further curtail the fishing of the people of the State.

The seaway is an extremely controversial issue and on the best authority the only thing that would happen to this Country would be to acquire an enormous debt, with all the benefits going to foreign shipping as there are practically no American merchant ships that would fit the locks or the channel. You state that the only opposition to the project is the Railroads and if that is so maybe they are the only ones that have the intelligence and foresight to realize how detrimental such a project can be to the good and welfare of the citizens of the State of New York.

If Canada wants it, let them have it, and mind your own business, which is Conservation, and keep out of affairs that are of no concern of the New York State Conservation Department.

Charles L. Van Atten, Croton-on-Hudson

• *Briefly, conservation is defined as the wise use of natural resources. The St. Lawrence River represents one of the greatest of New York's natural resources, both in magnitude and value; its wise use is a matter of concern to this Department.—Editor*

Louse fly on grouse

Dear Editor: The writer is a grouse hunter and subscribes to your fine magazine. During the past fall, I had the pleasure of hunting grouse in Sullivan, Cortland, Chenango, Albany and several of the western counties. In all of the counties hunted by me or my friends, we found an abundance of grouse this year.

On one particular hunt in Chenango County, several birds were shot by the writer which had on them a brown fly. It seems to me that during the last cycle in 1939-40 or thereabouts, we found this same fly on many birds. Does this portend the downward trend of the cycle, and if so, does this fly have anything to do with the disappearance of grouse during the downward trend?

Lawrence B. Schlums, Rochester

• *This is the "louse fly", a true fly but modified in form and habit to resemble a louse. The disease study of grouse by Levine and Grable revealed no relationship between the occurrence of the fly (which is common) and the grouse cycle.—E. L. Cheatum*

Brace yourself

Dear Editor: I seem to recall that one of your past issues contained a small item relative to a chemical that could be added to a small lake which would prevent the growth of algae but would not harm fish or game.

I believe the name of this compound possessed sixteen or seventeen letters, and I would appreciate receiving any information you can provide.

F. H. Billings, Pittsford

• *2, 3 dichloronaphthoquinone.—Editor*

Those carbines again

Dear Sirs: Please tell me if it is legal to hunt in this State with a carbine rifle such as those used by our armed forces. I have been told there is a minimum barrel length for rifles, and would like to know if this is true.

George Marco, Schenectady

• *A carbine similar to the type you write about is considered a semi-automatic. Unless you can reduce the magazine and clip so that you don't have more than 5 shells in the clip and one in the chamber, making six in all, you can't use it. You'd have to build up under the floor plate of the clip to do this. And watch out that you don't get hold of a fully automatic type carbine; then you run afoul of the Federal law, as you'd have a machine gun. There's no restriction on the length of a barrel as far as our law is concerned, but we abide by the Federal rule of nothing under 18 inches, applying to both rifles and shotgun barrels.—R.B.M.*

What happened?

Dear Sir: Enclosed you will find photos taken by me Oct. 19 of two deer locked in death in a forked tree. Description: Found by Archie Oakley. Location: Southwest of Milford, approx. two miles from village. Very top of steep hill. Date found: Oct. 18, 1953.

Thomas H. Kennedy, Jr., Milford

In time of need

Dear Editor: Camp Dudley is the New York State Y.M.C.A. boys' camp at Westport, New York. It operates for approximately ten weeks in the summer and feeds 400 boys and young men three times a day during that period.

Please put us down as a food source in times of emergency, if necessary, such as the Cold River fire last summer. We can turn out limitless quantities of sandwiches and coffee on a minute's notice. We're back of the Conservation Department 100 per cent. What a tremendous job the whole Department is doing!

Robert H. Marshall, Westport

• *Many thanks.—Editor*

Back yard fish

Dear Editor: I have a concrete fish pool in my back yard. The pool is lined with a black water-proofing compound that is ordinarily used on roofs. The lining was to prevent the water seeping through the concrete. My problem is that the water turns green in a few weeks' time and prevents seeing the fish.

Could your biologists tell me if there is any chemical I may use to prevent the above —which will not harm the fish?

G. T. Frees, Baldwin, L. I.

• *The coating of your pond has nothing to do with the problem, which is essentially one of fertility. After a period of time the droppings of the fish and any uneaten food particles accumulate on the bottom and form a reservoir for the substances necessary for plant growth. The unicellular plants then will multiply very rapidly. While not a complete answer to your problem, a thorough cleaning of the bottom (and care to avoid overfeeding) may measurably increase the periods before further cleaning and replacement of water becomes necessary. Another approach would be to use a small circulating pump which would discharge back to the pool through a box of fine sand. Removal and replacement of the top layer of sand might be necessary as it becomes clogged by filtering out the algae. Such a system would operate to remove the algae before they become so abundant. But if such a system were to be used, avoid the use of copper piping, as otherwise a build-up in copper content might eventually kill the fish. —George Burdick*

Wildlife and civilization

Dear Editor: Reading your Aug.-Sept. number on page 39, I saw an article that interested me: "Jarred Squirrel." Can match it with "Canned Skunk" and "Mute Dog."

Riding toward White Plains, we saw a very shiny thing crossing the road in bright sunlight! It proved to be a skunk with head completely hid in a can. But who would attempt to assist it? And then our dog came to the door one morning in perfect silence; a salmon can had tempted him, and it was locked on his tongue. We bent the tin cover down in the can and so released the poor animal.

Mrs. Jacob B. Petty, Bayshore

Smokey Coke?

Dear Editor: Enclosed is a photo you may want to use in the THE CONSERVATIONIST.

Every year we nail up hundreds of "Smokey" and other signs, to make people conscious of forest fire hazards and to remind them to use precautions in the woods. A few people use these signs for targets, and a few signs are mutilated in other ways, but this is the first time I ever saw "Smokey" recommending that we drink Coca Cola.

Randy Kerr, Forest Ranger, Glenfield

Owl pellets

Dear Editor: What wild animals in the Bear Mt. Park region might throw up hair balls like the common house cat?

I have found on numerous occasions cigar-shaped masses of hair about ½ to ¾ of an inch in diameter and perhaps 3 to 3½ inches long. They do not look like animal droppings to me, since there is no other matter in them except hair.

Raymond Darrenougue, New York City 22

• *They sound like pellets regurgitated by owls.—Editor*

Nannyberry

Dear Editor: Judas Priest, where did you get the name Nannyberry?

When I saw it in Oct.-Nov. issue I thought it resembled Blackhaw, so I got out the dictionary, but no Nannyberry. Then I looked in the large dictionary that should have everything, and the nearest I could find were Nannyplum and Sheepberry, and both were described a Blackhaw. If the Nannyberry is Blackhaw, it is edible for humans as well as wildlife. I ate some yesterday and liked them.

Fred C. Ralph, Erie, Pa.

• *Blackhaw is similar to Nannyberry. Both are in the same plant family, but Blackhaw is* Viburnum prunifolium *and Nannyberry is* Viburnum lentago. *Both are edible and make swell wines, pies and jams.—Nick Drahos*

Pigeon bands

Dear Sir: Recently there was a pigeon around my house that seemed quite tame. It came quite close to the house one day and I noticed a band on its leg. After considerable difficulty I managed to catch it and read the band. It said UPF 52 A7692. To satisfy my curiosity, what does this tag mean?

Frank Moulton, Rome

• *The number on the band indicates a registry-ownership identification. We've examined our list of registry numbers but cannot come up with the one you indicate. You might write to the American Racing Pigeon Union, Inc., 214 Congress Street, Jersey City 7, N. J.—R.B.M.*

Gentlemen: Last Monday when we went to work, we found a pigeon walking around the mill yard. It was perfectly all right, although probably tired. There had been a rather severe thunderstorm the evening before, and we thought that this might have forced the bird down. One of the boys caught it, and the leg bands were marked as follows: Metal band—AU 52 RI 299. Rubber band—P-199. A report concerning a similar bird seen in Speculator at this time stated that it was one of a group racing across country. Can you tell us where our visitor came from, and who he belonged to?

J. E. Jackson, Wells

• *We find that AU 52 RI 299 belongs to Mr. Charles Coe, 399 West Brittannia Street, Taunton, Mass. Just what significance the rubber band with P-199 has is a guess; it could be a special race number.—R.B.M.*

Circulating

Attention Mr. Wales, Circulation Manager: Attached you will find a list of 53 names, new subscribers to THE CONSERVATIONIST. Also attached you will find a money order in the amount of $53 to cover these subscriptions.

These subscriptions were sold by the Rangers of this District at fairs and various other meetings. I am sure you will agree with me that the Rangers of this District did a good job, especially in view of the fact that all these subscriptions are new ones.

Robert M. Roche, District Ranger

Take it or leave it

Gentlemen: In the past, membership in the ATIS (Adirondack Trail Improvement Society) carried with it a subscription to THE CONSERVATIONIST, a practice which was discontinued this year. It was by this means that I became acquainted with your marvelous magazine. I find myself enthralled by it, even though I neither hunt nor fish, and your magazine is mainly directed to those who do. If you could convince the ATIS to recommence the practice they have abandoned, you might get many subscribers like myself who otherwise would never have heard of THE CONSERVATIONIST.

Richard V. Upjohn, Saint Huberts

• *Thanks very much. But we feel we shouldn't try to put the heat on anybody to subscribe.—Editor*

Hunter identification

Dear Editor: No matter how good a sportsman a man is, he is susceptible to temptation. A few even to outright law violations. Such practices as taking a shot at a road sign with a high-powered rifle, hunting on posted land, breaking farmers' fences, shooting from the highway and killing a deer (and then walking up to see if it has horns) are but a few examples. It isn't Jones or Smith who does these things, but "just a hunter." A step into the woods and he is gone. Not a chance in a million of identifying him again. But put a number on his back *(a large number)* and a heavy fine for not wearing it when a gun is in his hands, and I believe most types of hunting violations would cease.

I know your Department has been considering this idea for some time and what I have said is not new. It seems so sensible and practical to me, I can't see why it hasn't been put into effect. If there is some reason why it isn't practical, I wish you would print it in your magazine.

Arthur J. Serth, Jr., Utica

• *The Department will sponsor such legislation again this year.—Editor*

The timber line and Mr. Moses

Dear Editor: Last summer, I met two elderly ladies from Brooklyn who had ridden to the top of Whiteface Mountain, and I was interested to know how they were impressed with the magnificent view.

"Well," the talking one replied, "it was all right." And the non-talking one nodded her head in assent. But there was a questioning reserve in their attitude. I wondered what was the trouble and asked them.

They liked the view all right—but the mountain! "Why, in New York," they said, "we have a Commissioner who gardens every space of earth in and around the city." They were disappointed because the top of the mountain was barren and neglected looking! Trees all twisted up. Absolutely no grass or shrubs!

I explained about the timber line. They had never heard of it and seemed somewhat skeptical. Evidently, to the people of New York City there is nothing impossible to Commissioner Moses—not even overcoming the timber line.

Mrs. Anne A. Heald, Lake Placid

Non-resident hunters

Dear Sirs: I noted in the August issue of THE CONSERVATIONIST an article stating that hunting applicants of 17 must submit a statement certifying that they have completed a course in safe handling of firearms.

I live in Conneticut but go deer hunting each year near Monticello, N. Y. This year I had intended to take my son with me for the first time. He is 17 years of age. Please let me know how I can go about obtaining a license for him, as it has not been possible for him to take a New York State course in gun handling.

Allen Williams, South Norwalk

• *If your son hasn't got a Connecticut license, he'll have to take the course; a list of qualified National Rifle Association instructors in Westchester County is enclosed. However, if he already holds a Connecticut license, have him attach it to the application blank enclosed and send it along to us with the fee, and he'll be furnished a license. The regulation says if he can produce evidence that he's previouly held a license, it's sufficient.—R.B.M.*

From goldfish to carp?

Dear Sir: Can you enlighten me on a well known theory that goldfish will eventually grow into carp, if let loose in water out of captivity. I know that it is illegal to use goldfish as bait, but what is the reason for this law? Recently it was stated in a well known magazine that goldfish will not grow into carp if let loose; is this true?

John Kulick, Sherrill

• *The goldfish belongs to the same general family as the carp, but is a distinct species. It is true, however, that the ordinary "bowl" goldfish, if liberated in a favorable environment, will reach two or three pounds in weight, and will become a serious competitor with game fish for available food. For this reason, their use as bait is prohibited. —Editor*

From the Times of London

Gentlemen: Enclosed clipping may be of interest to you as this blow-down has been mentioned in THE CONSERVATIONIST a couple of times this year.

Sheridan E. Stidd, Walton

By A Sunday Times Correspondent

A NEW method of saving timber from the shattered forests of north-east Scotland from decay is being tested on Viscount Cowdray's estate at Dunecht, near Aberdeen, one of the worst hit by the great gale of January 31. The wood is to be preserved by storing it in water.

As the fallen trees are dragged off the ground they are cut into 15-ft lengths and dumped into three artificial lochs on the estate. There they will stay for 18 months to two years, secure, it is hoped, against their two enemies, the bark beetle and fungus, neither of which can survive in water.

In this way, the estate can be cleared quickly and the timber held back for sale until 1955 when the market is likely to be better than at present when all woodland owners are trying to dispose of their wind-felled trees. Already there are more than 30,000 cubic feet of Scotch pine in wet storage. Eventually there will be treble this amount.

It is thought to be the only experiment of its kind in the country. Before it was put into operation, advice was sought from the timber research station at Princes Risborough and from experts in Sweden. The idea is not new. In Canada and the United States, logs floated down river from forest to mill have spent 18 months or longer on their waterborne journey and have still been in perfect condition and partially seasoned.

Unfortunately it is impossible to make wide use of this method as there are not enough places in which to store the logs. They have to be easy of access and fairly shallow: for in two years' time many of the logs will have sunk to the bottom.

Map of the world

Dear Editor: This question may not be quite up your alley, but I hope you may be able to give me a definite answer, or refer me to the proper source: Can a map of the world be put on a flat surface, without distorting the size or shape, or without putting relief slits in it?

John F. Wittman, Altus, Okla.

• *The answer is no. Maps of the world, or large areas of it, are projected onto a plane in a number of different ways in order to balance out scale errors.*

Well known methods of projection for making such maps are: (1) Mercator projection; (2) Lambert projection; (3) Polar projection.

I suggest that you write to the Coast and Geodetic Survey, United States Department of Commerce, Washington, D. C., for information regarding the above projections. I believe there are special publications explaining the projections mentioned.—Al. Davis

Our subscribers, too, make mistakes

Dear Sir: My face, perhaps, should be red re: p. 37 of the August-September issue of THE CONSERVATIONIST.

Let me correct one error: 44° 37½" N. Lat. x 73° 4' 18" W. Long. is in Vermont, northeast of Milton. Did I give these figures? They don't even come upon the Elizabethtown quadrangle of the topographical map! If so, at the moment I don't know where I got them; haven't found the notes on them.

It would have been more correct to have given the location as 44 5¾ (degrees and minutes) North by 73 44¼ (degrees and minutes) West.

Alarik Walton, Jamaica

Outlander

Dear Sir: I am with much love to write you this letter. I am a boy of 15 years attending school here. My height is 4 feet 10 inches. Please sir, I want to know something about New York State Parks and Maps. I think you can supply me some. I will be very glad to here from you again with good wishes, I remain.

D. K. Amofah,
House No. 112,
Kokosu,
Via Asikuma,
Saltpond Dist.,
Gold Coast,
British West Africa

• *We sent him the stuff.—Editor*

Credits

Second cover, Wm. D. Mulholland; pages 1, 4, 13, 14, 17, H. Wayne Trimm; 2, Christian Science Monitor; 8, David G. Allen, Doug Finch; 10, Arthur A. Allen; 12, Martin Pfeiffer; 19, Weedmark, Old Forge; 24, Fred Chambers; 27, Soil Conservation Service; 29, Earl McGuirk; 30, Earl F. Merrill, W. Springfield, Mass.; 31, John Nemes; 33, Frank Gesselein; 3d cover, Clayt Seagears; 4th cover, N. Y. S. Museum.

The Inside On The Outdoors Series

BOOTSTRAPS FARM

ONE Sunday last November we drove over the Hudson River bridge from Albany into Rensselaer County and headed East towards the high hills which lap along the Massachusetts line. It was a great day and the fall foliage was like sunset on the land.

After a dozen miles we turned the car off on a dirt road which the sign said led up Curtis Mountain. We could see its pine-toothed ridge from the valley. In a mile the road ended in a farmyard.

The little house was bare-floored empty. A litter of stuff and the marks of heavy truck tires across the lawn to the door told that the occupants had just moved away.

The house was white but the other farm buildings were paintless and their ribs showed. There was a smallish barn with heavy pegged beams hung with cobwebs which parted neatly at the door of a built-on cow shed boasting four stanchions and smelling royally of potting mixture number nine. Next was a big sty bursting with obviously well fed burdocks. These maintained ranks across the road in a chicken yard whose fence staggered up to the poultry house. This affair evidently had once housed a whole mess of vigorous fowl which must have been very happy, come night, to hop up on the rows of poles and get their feet off the ground. One end of this longish structure had been converted into a tar-papered garage with battened doors and a planked incline down which any car with listless battery might be pushed into life. Standing on mossy stone stilts nearby was a feed house and beyond were two old sheds, both kneeling. Used tires and cans lay about.

Also in this melancholy vista were two or three upland pastures browned here and there with encroaching brush, a privy hiding modestly behind a maple, a rim of wooded hills, a brook which slipped, somehow, through an acre of briars and alders back of the house, a bark-paved skidway where several great pine saw logs had waited way too long for loading, a high class rubbish heap and a whole slug of cats.

It was in this place that the road gave up. But we could see by the brushy trail between rows of old sugar maples that once it had borne traffic even deeper into the hills.

We stood in front of the house looking at the patchwork of abandoned, beat-up land and wondered whether it possibly *could* be within the realm of Man and the mechanics of today's conservation methods to prod it back to some kind of fruitful productivity. Then we unlocked the door and went inside.

We were the brand new owner of the joint.

It was exactly what we had looked for all summer.

We hope to find great happiness here doing some of the things with the old land that we've yakked about for years. And we plan this as the first of a series of periodic pieces telling about the developments. Possibly it may help guide the other thousands of new owners of abandoned farms in this State—people who otherwise might be innocently content to mend the house for country living but let their brushy acres remain unproductive—contributing nothing to anybody's economy. New York's greatest conservation problem still centers on what to do with the five million acres of abandoned farmland which comprise one-sixth of New York State (CONSERVATIONIST, Oct.-Nov., '47).

So we plan to seek on behalf of our typical hundred acres all the services that all the agencies dealing with conservation and land use have to offer. We expect to tell specifically about those services and what each does for our land. No special privileges will be sought. We want only the things done that Joe Blow can have done with a minimum outlay of cash, labor and knowledge of land use practices. We simply want to get the land back into the kind of production for which it is best fitted and do it within the means and capabilities of anybody. If that can be done with *this* hundred acres, it can be done anywhere in the State.

There's a lot of it lying around if you want to buy a piece. Winter is a good time to start looking. Roads and buildings look their worst then.

* * *

At every opportunity last summer we toured within reasonable commuting distance of the Conservation Department's Albany office to find what we wanted. Often it was difficult to locate the owners of promising looking countryside. Finally a real estate broker specializing in farm property dug this one up. The family had moved there from New York City, hoping to make money in the chicken business. They didn't and the husband got a job as carpenter. Then they decided to get out and get in with her widowed mother elsewhere. Meantime the wife had been milking one cow which was staked out daily on some handy piece of grass—for none of the fences remaining on the place would hold a cow with even half an eye for greener pasture.

They were very nice people and quite honest about all the deficiencies. But they were firm at $6,000. The water supply had never failed. That compensated for the lack of a heating system. The hill might be difficult during bad snows. But the Town Highway Superintendent assured us the road would be plowed and, anyway, he'd put a sand pile half way up the hill.

"Just carry a couple bags of concrete or some heavy rocks in the back of the car and don't worry."

Telephone and power lines reached to the place. The neighbors below were fine, solid folks. We spent another day walking over the place, flushing grouse, woodcock and deer. Then we went after a mortgage.

We got it but only after considerable scrambling around to come up with a warranty deed apparently satisfactory to the legal aspects of lending money out of trust funds. It seems there was a fly in the deed ointment way back along the line when a former farmer owner went broke trying to grow crops on the place and got pinched on a foreclosure. If we can remember what the lawyer told us, New York State had a law respecting dower rights at that time and when the notice of foreclosure was filed, a clerk or somebody listed only the farmer's name and not his wife, if any, as well. Since the old gal might possibly have had dower rights in the joint, there was a ghostly (yet apparently legal) chance that she might claim some kind of equity or otherwise move in to fog up the issue.

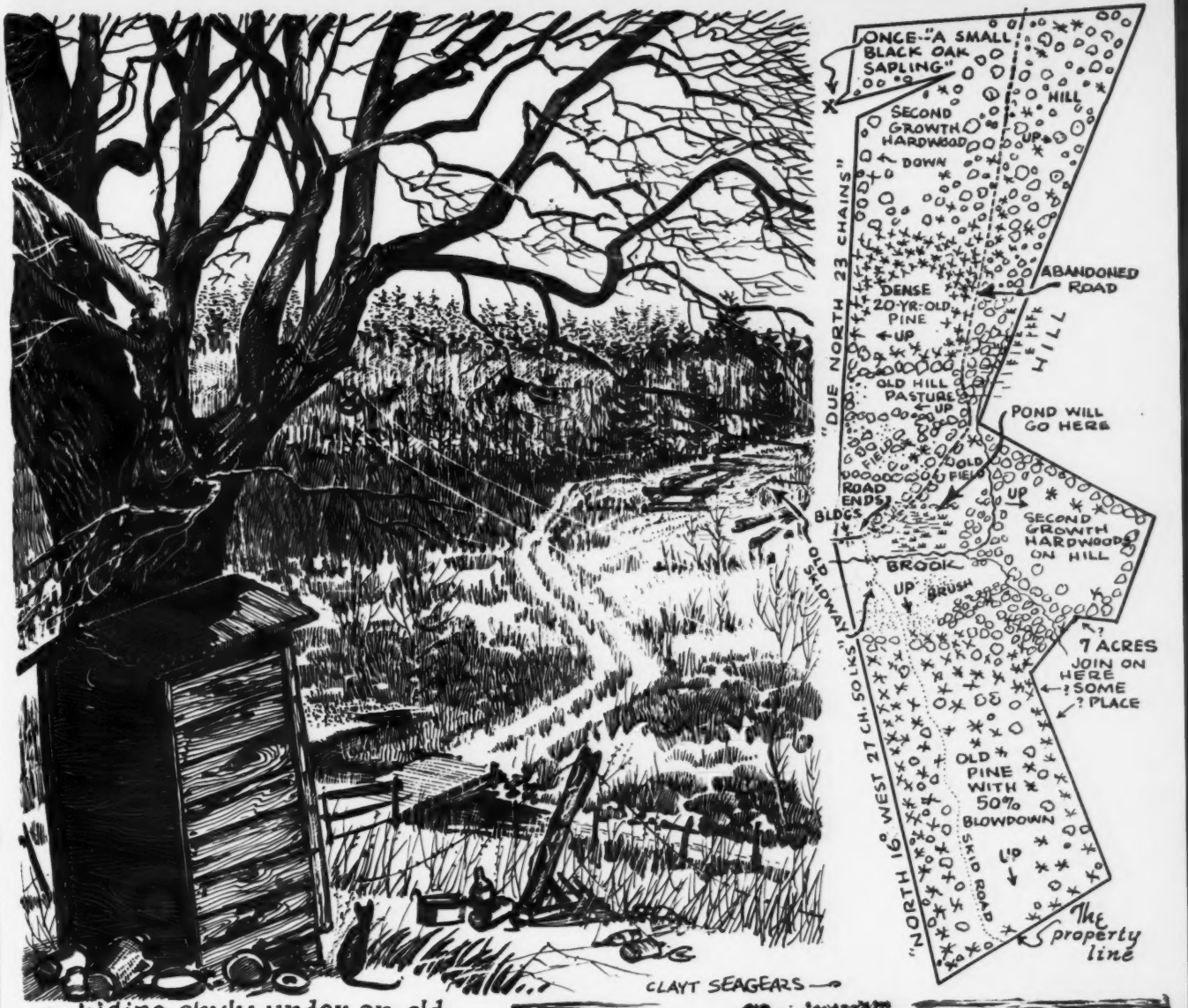
We got around that by paying an outfit to insure the title. Anyway we got the mortgage—and the deeds (one is a mere quit claim, signed by somebody who, it says, "conveys and quit claims her dower interest" in a sale previous to the foreclosure aforementioned by us earlier in this piece).

So you can see that a whole line of farmers gave up on this one. Maybe they all went haywire trying to find the "small black oak sapling—situate, lying and being in the Town of Nassau—" where the property's original survey began a long, long time ago.

The first conservation service we plan to seek is by one of the Department's Foresters who can spot one hellava *big* black oak.

More another time on the second productive development. First production was six kittens in the hay mow.

—CLAYT SEAGEARS



CLAYT SEAGEARS

.... hiding shyly under an old maple... the brook back of the house... the skidway... brush...

The old barn, pig sty, one of the kneeling sheds and here the little dirt road gives up

BOOTSTRAPS FARM

--typical of 1/6 of the State!

Courtesy
N. Y. S. Museum

SCREECH OWL
Otus asio asio (Linnaeus)
1/3 nat. size Red phase

SNOWY OWL
Nyctea nyctea (Linnaeus)
1/5 nat. size

WHITE GYRFALCON
Falco islandus (Brunnich)
¼ nat. size